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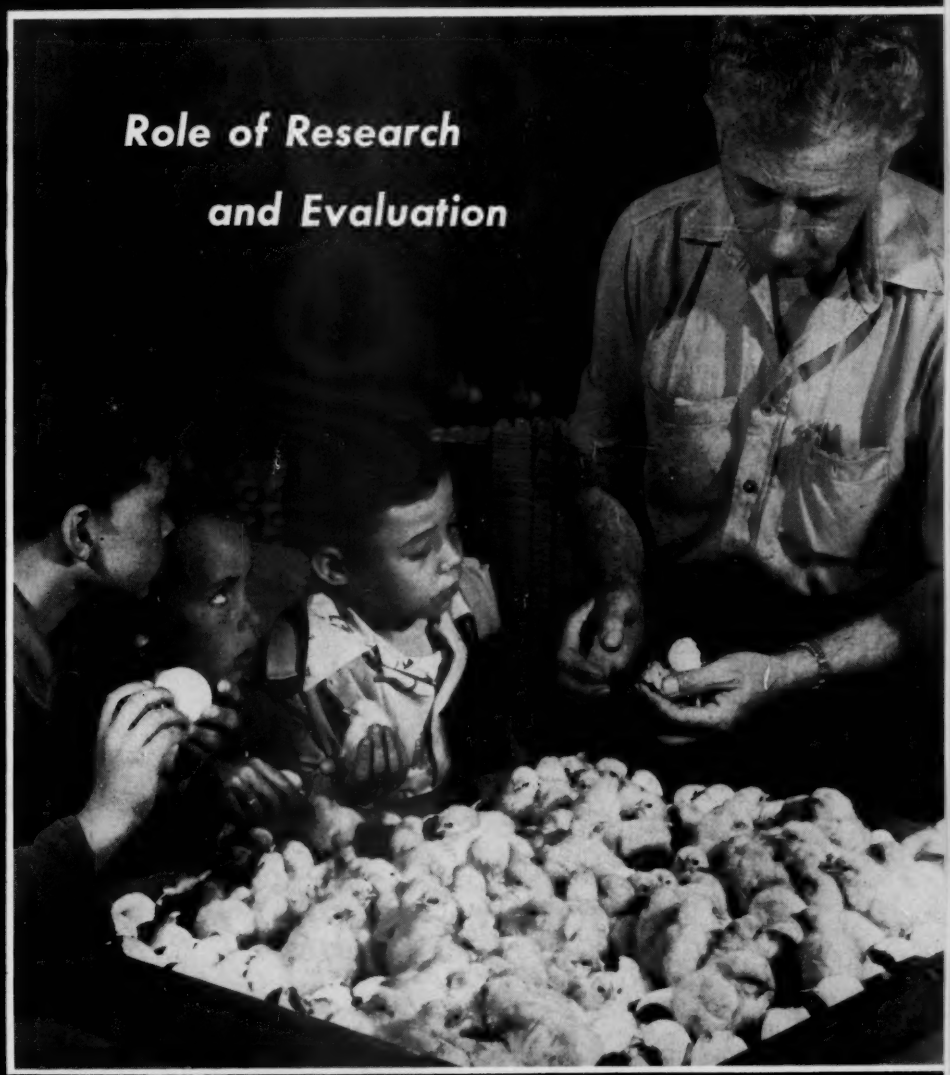


ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, NEA

EDUCATIONAL *Leadership*

JOURNAL OF THE ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT, NEA

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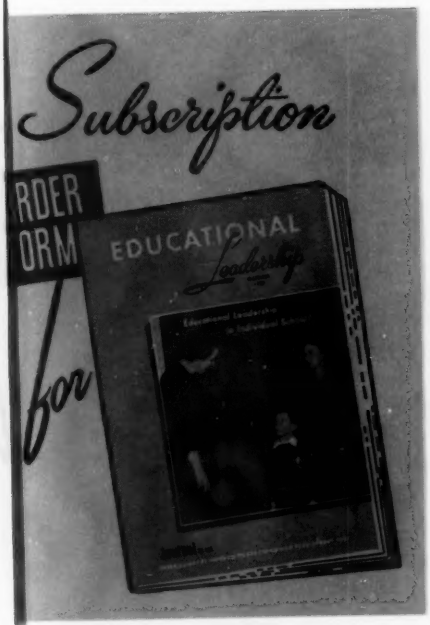
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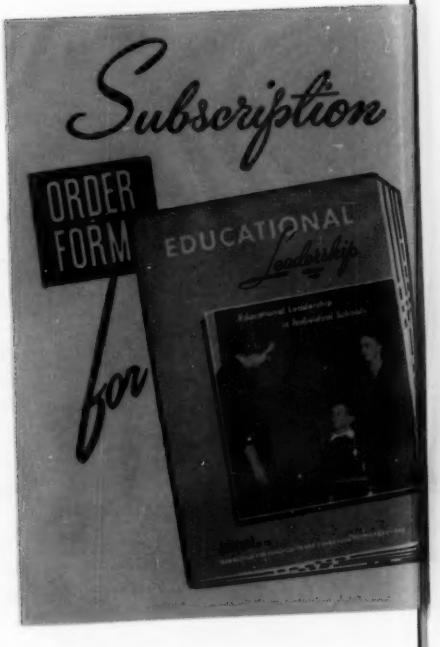
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**Vol. XIII, No. 7** **April 1956**

# Role of Research and Evaluation

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The photograph which appeared on the March cover of this journal was erroneously attributed to the Grand Rapids, Michigan, Public Schools. The March photograph was furnished for our use through the generous cooperation of the Public Schools of Newton, Massachusetts. We are glad to make this correction.

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Guest editor for the April issue: Virgil E. Herrick, professor of education, University of Wisconsin, Madison.

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Editorial

# Research in Curriculum

THERE IS no more important area for research in education than the area of curriculum. Budget, buildings, equipment, staff are justified by the extent to which they implement desirable educational programs. Parents are concerned primarily with the nature of the educational experiences their children are having in school. The responsibilities of a teacher to a group of first grade children are best expressed by the instructional program of the first grade. Yet research in curriculum which deals with the over-all conception of an educational program is conspicuous by its absence.

No one argues any more about the importance of what we know about children and their development and learning processes in the planning and development of educational programs in school. Yet we have few thoughtful and rigorous examinations of the important generalizations growing out of the work in the fields of learning and development and even fewer attempts to see the application and contribution of these generalizations to the learning experiences of children in school.

The exciting research in social behavior which has to do with leadership, group action, the influence of group performance on individual decisions as to what is right and wrong, and in the production of psychotic behavior is almost terrifying in its potential for building significant educational programs for human good on the one hand or for brain washing and the creation of a puppet state on the other.

For many years we have dreamed of the power and importance of research in the areas of learning, development, and social behavior and wished for the contribution it could make to curriculum. We have learned the bitter lessons that research in these areas does not automatically make contributions to educational programs and that educational programs include more than just generalizations about learning, development, and social behavior.

Both of the above lessons are difficult to learn but their point seems clear. There is a distinctive area of curriculum research which should be beyond studies of learning and which should be related to using the contributions of work in these fields to deal with the curriculum tasks of planning, developing, and testing educational activities for children in some kind of meaningful educational framework.

In all fairness, however, we have probably worked harder on the above problems than we have in another area of curriculum research—the problems involved in dealing with the common and persisting tasks of curriculum and instruction. We are constantly talking about *defining* our objectives, *selecting* learning experiences, *organizing* and *developing* these experiences, and *evaluating* their educational significance. Yet an examination of the professional literature will

find little material on the definition of objectives for purposes other than appraisal. Similarly, the problem of sequence or continuity in educational programs is relatively ignored in curriculum research. Every teacher deals with the problem of organizing learning activities; yet it is difficult to find any studies on this problem. We are continually worrying over the fact that we can evaluate facts and information better than abilities and abilities better than attitudes and values, yet we find very little effort to deal more effectively with this problem. Shouldn't we study the problem of evaluation from the point of view of curriculum and instruction as well as that of appraisal and test making?

Traditionally, our curriculum has been broken down into subjects and while a few courageous individuals down through the ages have developed other ways to organize educational programs, this has not been a very popular activity. Should the next twenty years be as barren in this respect as have been the past twenty?

The hullaballoo of the moment in the skill areas of our curriculum is over a popular and financially rewarding attack on reading. The most interesting aspect about the present scene in reading is that, of all the skill areas, this is the one most adequately documented by research. No important work in handwriting has been done in twenty years; spelling is an area of great conviction and large ignorance; arithmetic, in contrast, has profited from a steady and continuing series of studies on important phases of its development. From the point of view of our experience in reading, one can either be impressed with the fact that the research bases of our present program of teaching reading have not been well communicated or that the research programs in reading have been limited in their conception of the task. Could it be that the effort of the past twenty years has been directed primarily at the development of improved reading materials and has not been directed to the same degree to the continuing critical examination of the foundation ideas of such programs?

The plea of this editorial is that teachers, supervisors and administrators should have convictions about what constitutes good education but should not be starry eyed advocates of pat answers as to techniques and particular roads to the good life. Teachers and supervisors can do much to "product" test instructional procedures and materials against important educational goals and behavioral changes in children. Administrators can do much to create the educational climate which will permit and encourage this kind of testing and constructive development of instructional programs to take place.

Members of college and university staffs have a responsibility for research in curriculum too. We need to spend at least a portion of our time in working on the key questions of curriculum and on the related questions of appropriate research methodology. It is likely too that university people should spend some of this time in working with educational staffs in the field on the problem of the application of these ideas to instructional practices. Curriculum re-

search needs both of these related phases of curriculum study to make the contributions of the future.

One dictum of research is that the research problem dictates the data and the method. The consequence of this postulate for curriculum research is that different kinds of research problems dictate different kinds of data and research procedures. Work on the identification and definition of objectives will not deal with the same kind of data and research method as a study of the comparative efficiency of two methods of teaching handwriting or a study of the leadership roles of student chairmen of working groups. The design for a research study is determined by the nature of the problem and the kinds of questions for which we need answers. This is common to all research effort. Our need in curriculum research is to see clearly the unique kinds of problems we need to study and the questions about them we need to ask. Then we can develop the number of different and appropriate research plans for dealing with these problems adequately. Classical experimental procedures and traditional statistical design may not be appropriate to deal with problems which may call for creative synthesis, the historical method, or the application of value positions.

The purpose of all curriculum research is to add to our understanding and control of the educational program. Control is indicated by the sharpness of our direction and our ability to predict the future consequences of what we do. Research in curriculum has a particular obligation, therefore, to concern itself with studies of value and the conceptual framework within which educational activities are selected, developed and evaluated. Too often curriculum research is directed at the means and the specific not at the ends and the over-all context in which both ends and means become meaningful and important. The great need in curriculum research is not either the means or the ends but both; not either teachers or college professors to do this research but some complementary and cooperative effort which will exploit the distinctive and unique strengths and contributions of all.

In this issue the reader will find articles which will attempt to deal with the problems of curriculum research and to illustrate how teachers, supervisors and curriculum workers are attacking these problems. The key concept of these articles is that if man will become sensitive to his problems, if he will bring his intelligence and research procedures to their understanding and development, and if he will appraise the consequences of such efforts by important educational values and goals, educational improvement is bound to result. Apparently all we have to do is to move with confidence to our educational problems and bring to their resolution the contributions of our experience, the disciplines of our intelligence, and the significances of our educational and social values. What other activity could be more exciting and important for ourselves and for all of America's children?

—Virgil E. Herrick, *professor of education, University of Wisconsin, Madison.*

ROBERT S. FLEMING

# Research Procedures in the Selection of Curriculum Content

**"Research activities carried on locally should become the key for the selection of curriculum content."**

A SCHOOL FACULTY in a southern community recently discovered that the predominant need of the tenth grade students was a need for *freedom from fear.*[1] In another school it was found that boys and girls had extremely low scores on aesthetic values.[2] A third faculty found that the problem area of greatest concern to young people was that of the *curriculum* and *teaching procedures.*[3]

In a second series of schools a first grade teacher found that little Mary, who was frequently absent, was rejected by other children in her room on each of a series of sociograms. A fifth grade teacher discovered that Anthony, who was having extreme difficulty in reading, had great interest in animal life and was currently raising and selling rabbits for a substantial profit. A high school English teacher found that Susan, an excellent home economics student, always chose to write themes on topics having to do with clothes, while Steve, a football player, wrote on sports.

[1] *Self-Portrait Needs Test.*
[2] Allport-Vernon-Lindzey, *Study of Values.*
[3] Ross L. Mooney, *Problem Check List.*

## A Research Approach

The above cases illustrate the practical implications of simple research techniques for the selection of curriculum content. How different such an approach to curriculum development is from that of making the assumption that a textbook alone has all the needed and appropriate content for all children of a given age regardless of their current activities.

The first three examples suggest important emphases in the work of these classes. The need for freedom from fear, or aesthetic values, or clarification of school problems would likely *not* become central units of work. Yet each area is specific enough to give prominent direction to the selection of curriculum experiences. Perhaps the areas are specific enough to be used as a basis for approaching groups of students with this information (fear, aesthetic values, etc.) as a means of provoking, stimulating, enlisting other problems or concerns which could be directly considered.

Findings having to do with specific children likewise suggest either a process for involving an individual with

his group, or a specific topic for continued work. In the case of sports, animal life or clothes, teachers at once have an opening for an approach through writing, talking, reading, exploring, investigating, creating, informing, projecting, surveying, assessing, evaluating—all filled with active curriculum experiences. Yet this "research" approach should be analyzed, for it reflects certain unique assumptions. These assumptions have been described in the varied writings of numerous specialists in growth and development, philosophy, curriculum, and evaluation. They suggest that:

—Children are different and have different needs.

—Children reflect different backgrounds.

—Children have different purposes and aspirations.

—Motivation is complex and must be varied to reach varying personalities and capacities.

—Groups of children differ, even within a given community or school.

—Teachers are different, and hence all teachers likely cannot direct effectively the same experiences for children.

—Exploratory or research procedures can be employed by teachers which assist them in knowing a group of children.

—It is possible to build school experiences around real concerns of children and youth.

—Teachers can improve their effectiveness.

These are but a few of the assumptions which suggest that the teacher's first job is that of getting to know her class. What are the concerns, interests, hopes, anxieties of these boys and girls? What are their strengths and their weaknesses in the various content areas? What are their homes like and in what ways could their home and family living be improved? What is their perception of their community and its problems and resources? What is the status of their understanding of life in today's world and of our role as effective, participating citizens in such a world? Such questions have endless leads to the identification of content. The procedure for securing such information may represent a practical research approach to the selection of curriculum content.

In the significant yearbook of the National Society for the Study of Education, *Adapting the Secondary-School Program to the Needs of Youth,* Tyler discusses two types of needs: those growing out of the drives and tensions of the student and those growing out of the demands of society. Specific procedures are discussed which help teachers translate information about needs into specific teaching goals. These procedures involve a research approach to curriculum development.

Writings in the curriculum field have periodically referred to the need for research in the area of content. A typical statement is found in *Review of Educational Research* (April 1953): "Missing from the research literature are studies of content for the elementary schools designed to answer the basic question: What should children study in the elementary school? Research and discussion have instead centered on the *process* of curriculum development rather than on the *content* of curriculum."[4]

Research procedures may be used for

[4] G. Wesley Sowards and Celia Burns Stendler, "The Content of Early and Middle Childhood Education." *Review of Educational Research XXIII,* No. 2. April 1953. p. 158.

*Robert S. Fleming is professor of education, New York University, Washington Square, New York City. Dr. Fleming is chairman of ASCD's Research Commission.*

the purpose of studying or sizing-up *groups* of children. This may be for a grade level, for an individual class or for small groups within a class. Results might be summarized in terms of trends for the group and would be an aid in determining those characteristics most common to the entire group. This often is useful as a basis for discovering broad areas around which a teacher might work. For example, a home economics teacher found that upon using the Mooney *Problem Check List* with a ninth grade group, the pupils' problems tended to fall in the area of Courtship, Sex and Marriage. This, then, became a group topic and a study was projected around problems in this area. Had their problems fallen in the area of Health and Physical Development, the group's study would likewise have been focused on specific health problems.

The first examples used in this article are illustrative of findings from groups. An English teacher whose students showed a need for freedom from fear when she administered a Self-Portrait needs test, used this as a basis for determining curriculum content. Although she was concerned with the pupil's growth in communication skills, she created many opportunities for individuals and groups to engage in self-understanding as a basis for eliminating fear. A standardized English test was taken and each student was aided in diagnosing his errors. The gross findings of the group were also analyzed and specific group emphases identified. With specific areas of weaknesses in one phase of their work identified (grammar), the teacher assumed that some basis for eliminating some fear was created. She then engaged in other activities which she hoped would help students with this problem. Illustrative of these activities are:

a. Each student wrote an autobiography. The class studied autobiographies and decided what should be included in writing their own. They identified eight areas and decided to write a chapter for each area. Each week the group wrote a chapter of his autobiography. Class discussions dealt with concerns which the students raised, events in their experiences, and ways of portraying their feelings about their background. Emphasis was given to outlining, mechanics of writing, and ways of diagnosing errors.

b. Discussions were held concerning people who had influenced their lives, values and problems. As students revealed fears, these were discussed and efforts made to clarify them.

c. Panel discussions were planned and presented dealing with local problems of young people. The group was aided in looking at sources of confusion, anxiety and tension.

d. A school assembly was planned which became a "youth forum."

e. Individual conferences were held by teachers with students. In many cases this was followed with interviews with resource people in the community, doctors, nurses, ministers and with other teachers. In many cases personal problems were considered which were treated in a confidential manner.

It is interesting to note that students engaged in a variety of experiences which are typical for an English class

(reading autobiographies, writing, outlining, discussion, panels, assemblies, working on specific mechanical skills of writing, spelling). At the same time there was a continuing trend of self-understanding, assessing one's feelings, opening up one's anxieties, and seeking help. The assumption was not made that all fears were eliminated, yet there was evidence of growth in self-understanding, in participation, in adjustment to school and community.

### Procedures in Research

Throughout this article an effort has been made to show that many research procedures which aid in identifying student problems and needs are relatively simple and easy to execute. By and large, it becomes a logical and systematic approach to evaluation. Actually, the identification of goals, problems and curriculum activities is an initial phase of the evaluation process. In sizing-up pupils (either as groups or as individuals, the following "research" procedures seem reasonable and can serve as a basis for selecting curriculum content:

1. *Assessment of pupils' academic needs.* This may be done by such activities as:
   a. The use of standardized tests given early in the year (by teachers to their pupils)
   b. Analysis of pupil performance
   c. Analysis of products of students' work
   d. Systematic interviews with other teachers who are currently working with the pupils
   e. Analysis of existing school records and conferences with teachers who prepared such records for clarification and specific information
   f. A series of observations of pupils' performance by principal, supervision and parents followed by appropriate summary conferences with the teacher and pupils

2. *Assessment of pupils' interests, attitudes, values*
   a. Observation of students' responses to specific situations
   b. Analysis of a series of writing assignments in which students discuss their feelings, concerns, beliefs
   c. Use of existing tests, such as:
      (1) Interest Index
      (2) Science Research Associates, *What I Like To Do.*

3. *Assessment of pupils' emotional needs*
   a. The Wishing Well
   b. Self-Portrait
   c. Long, Long Ago

4. *Assessment of Youth Problems*
   a. Mooney *Problem Check List* (Junior or Senior High form)
   b. SRA *Youth Inventory*

5. *Assessment of pupils' skill in critical thinking*
   a. Watson-Glaser, *Critical Thinking Appraisal*
   b. Interpretation of data (various forms)
   c. Logical reasoning

6. *Assessment of pupils' work habits*
   a. Observation in a variety of situations
   b. Science Research Associates, *Can You Find the Answers?*

7. *Assessment of problems of a particular community*
   a. Summary of existing studies
   b. Survey of certain aspects of community life
   c. Pooling of findings from existing resources (agriculture agent, Health Department, occupational studies, etc.)

8. *Analysis of life demands of children and youth in the community*
   a. Analysis of employment opportunities of students
   b. Analysis of home responsibilities
   c. Analysis of community activities
   d. Analysis of school activities

9. *Assessment of past school experiences of the group*
   a. Analysis of school records
   b. Analysis of student responses
   c. Analysis of conferences with other teachers
   d. Analysis of parent interviews

10. *Assessment of available resources for curriculum enrichment*
   a. Identification of competencies available in faculty, parent group and student body
   b. Inventory of vital centers for industry or for facilitating industry in the area
   c. Inventory of historical spots and people in the community who know them
   d. Survey of library resources, educational situations and agencies

11. *Assessment of major research concerning characteristics of the particular age group with which one works*

12. *Assessment of findings of studies of our society and needs and demands it imposes upon effective participation therein.*

The suggested procedures listed above are merely illustrative of approaches to the selection of content. Such procedures are dignified as "research" *to the extent that teachers employ systematic, comprehensive and objective procedures* to these activities. Results of one test certainly cannot be viewed as a comprehensive accumulation of data. Yet, if such data are carefully collected, with results viewed as an hypothesis, and validated by subsequent findings, one could have more faith in the process.

In spite of all the procedures listed, doubtless teachers must place greatest weight on a careful and systematic assessment of what they *observe* and what they *hear* from their students.

Perhaps one of the most significant aspects of the research potential in identifying content for students is that of recording carefully what was done, bases for such activity and descriptions of progress made. Without such an activity, the process is often lost and future teachers must begin all over again.

Such an approach to curriculum development is often confusing to teachers since it is developmental and hence one cannot block out an entire year's work in advance. Also, it is confusing since many supervisors and principals still adhere to a procedure which is outlined and described as "standard" for a particular grade. This calls for careful involvement of such people in the process. It also calls for continuously interpreting the procedure to all concerned.

Teaching in today's school is an exciting experience. We used to start our automobiles with a crank and primer. Research in technology has brought striking changes in automobiles. Often we fail to recognize that research in the curriculum field has brought about changes which are even more striking. Research activities carried on locally should become the key for the selection of curriculum content.

**a worthy professional resolve —**

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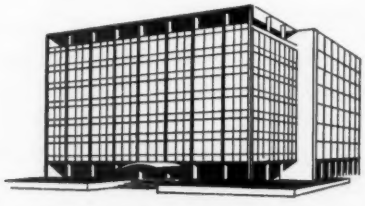

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GLENN G. THOMAS

# Role of the Laboratory School in Introducing Educational Practices

**This article describes the role of one campus laboratory school in studying and evaluating new projects and innovations in education.**

THE WORK OF great laboratory schools through the years has made significant contributions to modern elementary education. Had such experimental centers as John Dewey's Laboratory School at the University of Chicago, the University of Missouri Elementary School, the Lincoln School at Teachers College, the Ohio State University School, and the Elementary School of the University of Iowa not blazed the trail in curriculum development, our schools today might be little different from those our grandparents attended. The influence of these schools upon the thinking and practice of school people has, indeed, been great.

The recognition, for example, that boys and girls grow and develop at individual rates within the framework of a pattern that is common to all children, and that all behavior is caused, has significantly modified modern school practices. Much of the implementation of what is known concerning the nature of the learner and of learning can be credited to the experimentalists in the laboratory schools. These schools helped us move away from the concept of the mind as a muscle to be exercised or as a receptacle into which facts could be poured, to the realization that learning is most effective when it is consistent with the needs and interests of children. Most of us now see the need for teachers and children to plan and work together in a democratic relationship. The need has also been made apparent for a closer home-school relationship in order to better understand the whole child and how to meet his needs for security, adequacy, belongingness and affection. These early laboratory schools also demonstrated that the environment outside the classroom as well as inside is rich in material and human resources for learning. A functional approach to teaching subject matter and fundamental skills has come through organizing learning experiences around problems or large topics of interest and utilizing experiences that are related.

The reader is referred for an excellent and more comprehensive treatment of significant contributions of laboratory schools to Rose Lammel's Chapter XI on "Experimental Centers as Trail-Breakers and Accelerators in

Curriculum Change," in the Thirteenth Yearbook (1953) of the John Dewey Society, *The American Elementary School*. This chapter reviews the nature and effects of the major types of experimentation carried on in the pioneer schools.

## Dilemma of the Campus School

Despite these historic contributions of laboratory schools, modern school conditions create a dilemma as to the role of the campus laboratory school. In these latter schools, teacher education functions have frequently become confused with research functions. Many educators therefore believe it necessary to clarify the functions of the campus school. At the annual meeting of National Elementary School Principals recently held in Denver, the principals of campus laboratory schools met for the first time as a group to think through this problem.

While student teaching has been the primary function of most campus schools, there are those who believe that this emphasis cannot be justified. There is practice and opinion to support the plan of confining the teacher education responsibilities of the campus laboratory school to those of observation and limited participation. In such cases public schools off campus are being utilized for full time student teaching.

The advisability of carrying on extensive research, of general significance to American schools, in those laboratory schools faced with even limited responsibilities for preservice teacher education seems doubtful. Research of this nature should not be carried on simultaneously with observation and participation since it requires the complete attention of the people conducting it. Many times, too, in such a setting, it is necessary to deviate from generally accepted practices to such a degree that it would not be a practical situation for the teacher in training.[1] It appears likely, then, that fundamental, scientific research requiring methodical controls and measurements, if it is to be done, will need to be carried on by other schools established for that purpose.

*Glenn G. Thomas is associate professor of education, University of Miami, and is principal of the Henry S. West Laboratory School, Dade County Schools, Coral Gables, Florida.*

It does not follow that no experimentation can be a part of the campus laboratory school. Any school, worthy of the adjective good, is constantly striving to improve its program. The school that is not trying to find better ways of performing its function is, instead, permitting its program to become sterile. An experimental attitude and some techniques of gathering and evaluating evidence are required to maintain a dynamic program. The campus laboratory school, just as any good school, should be concerned with some kind of experimentation. But if the laboratory school is to provide for observation and participation by preservice teachers, then the experimentation it carries on needs to be confined to those innovations which can be tried out satisfactorily under these conditions.

[1] See H. L. Caswell, "Place of the Campus Laboratory in the Education of Teachers," *Teachers College Record*, April 1949, for an elaboration of this point of view.

Those associated with the West Laboratory School also believe that study and observation of practices in one school by the staffs of other schools in the same system may result in some limited dissemination of promising practices. The idea of experimentation to which this school is committed is basically one of a center for the *innovation* of new practices in Dade County. As we see it, various practices might be tried out first here, and be evaluated by the school faculty for the school's purposes and also studied by other faculties for applicability in sister schools. It is not assumed that basic research on teaching-learning processes will be conducted in this situation.

### Plan of One Campus School

An example of a laboratory school planning to function in this way is the Henry S. West Laboratory School located in Coral Gables, Florida. Jointly operated by the Dade County Board of Public Instruction and the University of Miami's School of Education, the school is an ultra-modern structure consisting of two classroom buildings (two more to be added in 1956-57), an administration building, and a cafetorium all linked together by covered walkways. Built for Florida living, the exterior of the buildings is largely composed of movable glass jalousies. The school, which opened in September 1955, houses kindergarten through grade six.

This school provides the facilities necessary to screen some curriculum and administrative innovations before they are considered by other elementary schools (currently 101) in Dade County. It further serves the purpose

COURTESY, DADE COUNTY PUBLIC SCHOOLS, FLORIDA

This school provides facilities for trying out some curriculum and administrative innovations.

of observation and limited participation on the part of students majoring in elementary education prior to their intern (student teaching) experiences.

The laboratory functions of the school are directed by a joint policy committee composed of three members from the university faculty appointed by the president of the university and three members from the Dade County Public Schools appointed by the superintendent of public instruction. The policy committee last fall solicited written proposals of innovative procedures from Dade County Schools personnel, university faculty members and the laboratory school staff. A composite of the proposals was sent back to the groups making the suggestions for their reaction, and a final list for current development was approved by the policy committee after considering these reactions. Subsequent proposals of innovative studies may be made to the policy committee by any of the groups concerned. Projects that are finally approved by the policy committee are referred for development to the laboratory school staff through the principal. These referrals include any necessary budget authorizations and directions

as to general procedures, length of time to be involved, kinds of evidence to be sought, and the nature of the report to be finally submitted to the policy committee.

#### *Innovative Projects*

Projects that have been approved by the policy committee and are being developed by the laboratory school staff this first year include in addition to a double-session kindergarten (planned even before the school opened), experimentation with a summer program and in developing more effective home-school relationships. Brief descriptions of these projects follow.

***Kindergarten.*** The fact that kindergarten is not a part of public supported education in Dade County has been and is of considerable concern to many people. There has been neither classroom space nor necessary finances available to provide a kindergarten teacher for a group of twenty-five children. Since this ideal situation is not feasible at this time, the laboratory school is attempting to determine if a satisfactory kindergarten program can be carried out by one teacher and a full-time assistant for two groups of twenty-five children each. Whether the program is a satisfactory one will be determined in part at least by the kind of adjustment the group makes to first grade. In an effort to determine what is an effective length of a daily session in kindergarten, the one group attends a session of greater length than does the other. The decision as to the length of the kindergarten session will be made on the basis of whether one group seems to adjust better to first grade than the other and on the value judgments of the teachers concerned.

***Summer Program.*** A second project approved by the joint policy committee is concerned with development of a summer program. This program will make possible for the first time visitation facilities for the summer session students at the University of Miami. In addition it will provide experimentation in a type of summer school program which might be offered to elementary school pupils in public school centers in the county. The length of term, length of the school day, and classification or grouping of pupils are factors that will be considered in the project.

***Home-School Relationships.*** The perennial problem of home-school relationships is the third area in which the laboratory school staff will attempt to develop some promising practices that will improve its own program and may be applicable in sister schools in the county. The project will be concerned with two aspects of the problem. The first is devoted to developing methods and techniques of conferencing with individual parents to better inform them of pupil progress and diagnose with them the cause of difficulties to aid further planning for their children.

The second aspect deals with involving parents in developing the total school program. Involved in this part of the project will be a study of the parent group to determine such factors as ethnic groups represented, economic status, educational levels, attitudes about child raising and education, and the kinds of experiences they provide their children outside of school. The survey will also determine special

abilities and talents possessed by parents to be recorded in a human resource file to be used throughout the school for the purpose of enriching and supplementing the instructional program. The survey will still further make an effort to determine the level of parents' understanding of the present program, their attitude toward the idea of parent involvement, and to ascertain what the parents feel are "needs" in the total program.

Other phases of the project will include inviting parents to join the staff in an in-service education class and to attend regularly scheduled teaching demonstrations. To provide opportunities for parents and teachers to meet within a framework that is vital and purposeful, a representative group of parents and the principal will organize general, sectional (K-3 and 4-6), grade, and room meetings around unmet needs or problems. It is planned that work committees will be an outgrowth of various meetings and that at the end of the year the whole approach will be evaluated in terms of changes that resulted in the program and in the understanding and attitude of the parents and staff.

Several other projects are being explored this spring as possibilities for eventual development. These include experimentation with the use of teacher aides, an intensive training program for fifth-year college students without adequate previous college work in elementary education, and a study of grouping in the classroom. Other projects have been proposed and will also be considered. As the policy committee and staff now see it, only those innovative studies which meet at least the following criteria will be approved and developed:

1. The study can be carried on satisfactorily under conditions of preservice teacher observation and limited participation.

2. The study promises possible improvement in the program of the laboratory school.

3. The study is of interest to other schools in Dade County and to the University of Miami.

These criteria, especially the first, rule out the basic research characteristic of the early laboratory schools but do permit use of the campus laboratory school as a first proving or screening ground for selected procedures. This we consider an important role to be played in a school system of this size.

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## Conference on Core Teaching

The second regional conference on core teaching in the Washington, D. C., area (Maryland, Virginia, West Virginia, North Carolina, and the District of Columbia) is scheduled for April 13 and 14 under the co-sponsorship of the George Washington University. The conference will open with a dinner meeting on Friday evening with Dr. William A. Van Til speaking on "Clarifying the Core Concept" and will continue on Saturday with a panel discussion and sectional meetings.

For further information about time, place, and program, write Mrs. Grace S. Wright, U. S. Office of Education, Washington 25, D. C.

LOUIS E. RATHS

# Role of Evaluation in Research Design

**This author analyzes, clearly and forcefully, the significance of the matter of prizing and the matter of judging in the area of research design.**

THE ACT OF "placing value upon" involves the dual process of cherishing or prizing and of appraising or judging. These processes come into play in the act of choosing and hence, where choices are to be made, evaluation plays an important part.

There is no specific problem relating to research design until there is some notion of a research to be undertaken. This research is *chosen* from among alternatives and the determination of what research to do is a resolution of a more or less complex value-type situation. This is true whether or not the research worker is conscious of making a choice, because there is always the single alternative of *not* doing the particular research in question. Choosing a problem is an act of evaluation. One places values upon alternatives in the process of judging them.

## Significance

Choosing the problem often involves a great variety of considerations. There is no necessary sequential order in which factors are taken up and, as problems vary, the factors change more or less. In choosing what research to undertake, evaluation is often brought to bear in a large number of ways. The researcher may consciously consider the significance of the proposed research with respect to the drawing of a conclusion which may extend beyond the sample studied. He is concerned with selecting a design which will allow him to draw a warranted inference about the population from which the sample was drawn. This design involves choosing a sample for the study in certain ways, and the choosing of statistical measurements and tests of statistical significance which have meaning for that particular situation.

Sometimes the significance of a study has a quality of greater universality because it is closely related to a theory whose influence would extend far beyond the sample studied. The research may be testing a single hypothesis which has been suggested by the theory and the results of the study go beyond the proof, disproof or doubting of the particular hypothesis: the testing of the hypothesis is also, in part, a testing of the theory itself from which

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the hypothesis was derived. Choosing researches which have their roots in theory involves placing a value upon theory and in this process evaluation is clearly seen.

The idea of significance extends beyond considerations of sampling and theory. A research may have social consequences of greater or lesser import. Matters of money, or time, or effort may be related to the findings. The research may be closely related to the conduct of the profession in its training institutions and thus have a professional significance. The study may be of great personal significance for the researcher in that it fits into a larger plan in which he is engaged. Seeing the relationship of a particular research to a larger program and judging significance in terms of that program also involve evaluation.

In developing a research design the investigator makes a decision about the level of statistical significance which will be acceptable in his study. This too involves evaluation and no ready-made formula will solve the problem for him. Where deeply cherished human values are at stake, the 5 per cent level may be rejected and a choice made of the 1 per cent level of statistical significance. Similarly, if huge sums of money are involved, or if many hours of teachers' or children's time are involved. There may be occasions where a 10 or 15 per cent level would be evaluated as acceptable.

Sometimes the choice of research is considerably influenced by the sources immediately available. Under these circumstances, there is need for considering the training, the skill and the interests of those who might play an important role in the contemplated research. There is need to consider the equipment available for carrying the research to completion. One must consider the samples available for investigation and whether or not they can be chosen in terms of the requirements of the statistical design. Judgments about the role of time in a research are often crucial. All of these judgments involve evaluations.

## Control and Accuracy

Many researches involve the consideration of control factors. The literature must be searched to find what previous investigators have discovered about control and this literature must be evaluated. Beyond this, moreover, there is usually the need for the selection of new factors which are thought to influence considerably the consequences of the research. This choosing is more of an art than a science and the investigator is guided by hunches and by inspired guess work. He is seeking factors which may have a bearing on the results and he is hopeful that they will contribute greatly to the possibility of predicting those results. To the degree that the one or many control factors are identifiable, and to the degree that, taken together, they constitute an accurate base for prediction, the investigator comes to believe that his research is controlled. On many occasions, after the design has been worked out and the data have been gathered, the experimenter reworks the material to find out to what extent he has "controlled" the study. These many acts of choosing, or of weighing and of making judgments are acts of evalua-

tion and play an important role in the design of research.

In many research studies the investigator develops a "pilot plan" or makes a "trial run." These offer only tentative bases for judging the adequacy of the research plan but they do constitute a form of evidence which allows the researcher to reconstruct some of his procedures, to develop new ways of handling data, and to anticipate certain difficulties in the research development. These considerations are evaluative ones and are an important part of research design.

To these must be added the research worker's concern for the accuracy of his computations. This activity involves the selection of instruments of measurement and often, before the study begins, a judgment has to be made about the probable reliability and validity of the measurements with respect to the particular group from which they are to be derived. This is an act of evaluation. Setting up procedures for the objective checking of the computations before presenting the results is another desirable quality in research design and the choice of these processes and the ways they shall be carried out involve evaluations by the research worker.

In every research the conclusions depend, in part, upon the data which are collected, upon the design which has been chosen, upon the assumptions which are made and upon the processes of reasoning which are involved in drawing a conclusion from all of the foregoing. In distinguishing between findings, inferences, conclusions and implications the investigator is making evaluative judgments. These involve a weighing of the assumptions which are involved, a weighing of their relationships to the suggested but tentative conclusions, and a deliberate, reflective, considered choice of words and phrases in accurately communicating the researcher's relative certainty or doubt or confusion as he sums up his work. The act of evaluating is inherent in these processes.

Enough has probably been said to indicate that in research design the matter of prizing and the matter of judging are of great significance. Formulas do not tell us what to do, or when to do it, or where to do it. Formulas do not tell us what kinds of inferences can be drawn from their application.

Every research involves a great deal of evaluation and it probably helps the research worker to be aware that he is making such judgments in choosing the research, in designing it, in carrying it out and in drawing conclusions from it. As this writer sees it, from start to finish, and all the way along the line, from the critical selection of the problem to the forms of final publication, the research worker is making value-type decisions. It is here assumed that the quality of, and the significance of educational research would be strengthened if there was more conscious awareness of these acts of "valuing" in the designing of research.

KENNETH J. REHAGE

# *Getting Evidence for Making* INSTRUCTIONAL DECISIONS

**To what sources may school people turn in getting evidence for making wise decisions concerning the instructional program? This article shows the pivotal role of the classroom teacher in obtaining such evidence and in implementing the decisions which result.**

DECISIONS affecting the instructional program of a school are made at many different points, and by many different individuals and groups. The broad outlines of the program are developed as faculties, working both as individuals and in groups, take into account (a) the determination of objectives, (b) the planning of learning experiences appropriate to those objectives, (c) the organization of the program into some defensible sequence of activities, and (d) the evaluation of the degree to which desired learning is being achieved.

In each of these various aspects of curriculum planning there is the possibility of choice. In planning for instruction in the social studies, for example, a variety of possible objectives can be considered. A realistic view would seem to suggest that wise choices among objectives, with a resulting concentration of emphasis upon a few major ones, is to be preferred over an effort to achieve many discrete and unrelated goals. Similarly, there is no one royal road to learning, and a variety of means can be used to attain particular objectives. Limitations of time and resources require that wise choices must be made. The literature in the curriculum field describes alternative methods of "organizing" the instructional program, and here again choice is necessary. There are several means by which progress toward objectives may be appraised. Part of the instructional task involves the selection of means most appropriate for evaluation in a given situation.

On what bases are such choices as these made? Not uncommonly, tradition or present practice is a persuasive force. Some educators are strongly influenced by promising innovations observed to be successful elsewhere. Looking to tradition and present practice tends to result in decisions which minimize the importance of changing conditions. To pursue a particular course of action, such as adopting a particular form of curriculum organization, merely because a neighboring community has had a successful experience with it is seldom wise. Instructional decisions can be made, however, on the basis of relevant evi-

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dence, systematically gathered and carefully interpreted. Such evidence can be continually sought to guide subsequent decision-making. The use of evidence in making instructional decisions increases the likelihood that the decisions will be appropriate to the situation, and that they will therefore have a genuine rather than a superficial effect upon the instructional program.

## Sources for Evidence

There are a number of sources to which curriculum planners can turn for evidence useful in making decisions about the broad outlines of the instructional program. One of the sources is the body of data that can be accumulated about the students. To be genuinely useful for making important instructional decisions such data would need to include more than achievement test scores, important as these results may be. Interests, attitudes, values, vocational plans, home backgrounds, out-of-school activities, are among the items upon which helpful information can be collected. Many schools have found it useful to carry on follow-up studies after young people leave the school. Data about students permit a faculty to study the general characteristics of the population whose lives presumably are to be positively influenced by whatever kind of instructional program is planned. Often it is desirable to interpret such data as these in terms of the generalized patterns of behavior commonly found among young people in the age groups served by the school. Many schools have found the concept of the "developmental task" useful in this respect.

A second source of data is the community of which the school is a part. It is not uncommon for teachers to be strangers to the communities in which they teach. Even teachers who have been in a particular school for some time frequently do not perceive the nature of profound changes occurring in the community until the change has been wrought. In large city schools, for example, the extent to which population shifts in the school community are changing the character of the total school population is sometimes less well understood by the staff as a whole than by a few teachers whose classes happen to be affected. In order to keep this problem before the entire faculty some principals maintain a map, displayed where all the staff may see, showing population movement in and out of the school district. Other aspects of community life need to be examined constantly in order to see what significance they may have for the important decisions involved in planning the instructional program. In these days of rapid change, the general character of community life can be markedly altered almost before one knows what is going on. Not infrequently the changes result in new demands upon the school and some consequent modification in its instructional program. A faculty can be guided toward wise decisions if evidence regarding these changes is readily available.

A third source of evidence useful in making instructional decisions pertains to the characteristics of the general cul-

ture in which our young people are to be inducted. In what respects are these characteristics quite stable and unlikely to change markedly in the foreseeable future? In what respects can rather profound changes be expected, with the result that new demands will be made upon the schools? Even a superficial glance back over the past three decades would reveal how much more broadly the task of civic education is conceived today than in the 1920's. Is it likely that the scope of education for citizenship will continue to expand? If so, in what respects? The current interest in strengthening educational programs in the sciences, in foreign languages, in mental as well as physical health, to name but a few areas, illustrates the manner in which the schools are expected to modify their programs in the light of anticipated as well as present societal needs. What other changes are in prospect? No school can afford these days to make instructional decisions without a careful assessment of present and future demands made by society upon young people. Schools are particularly intended to serve children and youth. They cannot serve children and youth well merely by providing an educational program well-suited to yesterday's world. Even though prediction in these matters is often difficult, the schools cannot do their job without considering the best evidence available about the shape of things to come.

A fourth source of evidence for making instructional decisions is found in the bodies of knowledge upon which the school can draw in planning its instructional program. In several of the fields which commonly contribute to the school program the accumulation of new knowledge continues at a rapid pace indeed. Not only is this the case, but increasingly one hears demands that more attention must be given to concepts from fields not ordinarily included in the school curriculum. History and geography, for example, have traditionally provided the bulk of the subject matter for elementary school social studies. Yet today one hears much talk about drawing more heavily from economics, anthropology, and other social science disciplines, in planning the social studies programs at this level. Developments such as these would seem to suggest that, in making wise instructional decisions, a faculty must continually address itself to the problem of determining what the *essential* contribution of the various subject fields will be and how that contribution can best be realized. Continued reflections on these matters ought to deepen insights to the point where important instructional decisions regarding particular subjects can be more intelligently made.

A fifth source of evidence necessary in making wise instructional decisions is found in the growing body of knowledge regarding the conditions under which effective learning occurs. Students of the learning process are continually seeking deeper understanding of these conditions and the various ways in which they encourage or impede learning. One of the recent developments, for example, has emphasized the profound manner in which the nature and extent of individual learning are influenced by pressures exerted in face-to-face groups. Similarly, attention has been called for

some time now to the influence of social class factors upon school learning. Believing that learning is firmly rooted in perceptual experience, some workers in the field of science education recommend that the planning of the instructional program in that area must take into account the extent to which it is possible for students to have direct experience with the phenomena they are to study. Where this is difficult, or perhaps impossible, a question is raised as to whether the phenomena in question should be studied at all. Learning is often represented as occurring with maximum effectiveness when individuals are confronted with problem situations meaningful to them. This consideration leads those who plan instructional programs to organize their programs around problems believed to be important and significant to the learner. Obviously decisions need to be made as to which problems, and in what sequence. These examples serve to illustrate how knowledge about the factors that make for effective learning can help us make basic instructional decisions with a greater measure of confidence.

There are other sources of evidence to which curriculum planners may in due course turn with advantage. But perhaps enough has been said here to suggest some of the places where useful data may be found and something of the ways in which those data may be used.

## The Teacher's Instructional Decisions

Of all the instructional decisions made, none is more important than those reached by the classroom teacher. In his hands is placed the task of providing the proper context which will make possible the effective implementation of all previous decisions. It is in the classroom where the instructional program is transformed from a mere statement of good intentions to a sequence of actual experiences out of which hoped for learnings may come. The teacher's decisions, if they are to be wisely made, require familiarity with the types of evidence suggested above. While his task is by no means an easy one, the teacher does have at least one quite distinct advantage over those who must make decisions about the instructional program as a whole. The teacher has before him a particular group of individuals. This group can be studied intensively, both individually and collectively. The teacher does not have to rely solely upon sweeping generalizations about students of the age level with which he is concerned, even though such generalizations may be helpful to him. He has immediate access to the most important body of data needed to make wise decisions, namely, data concerning these particular students.

If he will take the trouble to collect these data as systematically as he can, they will speak volumes to him and help him make wisely the instructional decisions he must make. Toward what specific objectives ought instruction to be directed in a particular class? This can be properly assessed only with some idea as to where the students now stand with reference to the various objectives thought to be appropriate. There is no other source of valid data on this point than the students themselves. What are the kinds of experi-

ences needed by these particular individuals to accomplish the desired ends? This will depend in large measure upon the nature of their previous experiences, and here there is apt to be a great deal of variation. Again, there is no more valid data than those which can be provided by the class itself. With such data at hand the teacher is in a stronger position to decide whether certain types of experience are genuinely needed by all and whether other types are best used for particular individuals and small groups. Probably one of the greatest wastes of effort in our whole educational enterprise comes from the trouble to which we go to insist that all students have experiences which may be repetitive for some, and hence inappropriate, or which may be premature for others, and hence likewise inappropriate.

Since the matter of how the classroom teacher gets and uses evidence is treated elsewhere in this issue, the point need not be labored here. It is perhaps sufficient to remind ourselves that decision-making in the classroom is the decision-making that counts. It determines what the actual instructional program will be. It provides the conditions which are thought to be appropriate in order to have genuinely effective instruction. With so much at stake, it would seem that the conscientious teacher has no alternative but to accumulate continuously and systematically the kind of evidence he needs to guide his own decisions with respect to instructional problems.

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JULIAN C. STANLEY

# The Interdependent Roles of Research and Evaluation in Teaching

**"The teacher introduces new procedures after analyzing their relevance for his situation and then evaluates their impact upon the students with respect to objectives of instruction."**

ROUGHLY, the somewhat vague word, "research," refers to three interrelated types of activities: consideration of written and oral reports by persons other than oneself, experi*en*tation, and controlled experi*men*tation. When speaking of the "experimental method" in education, frequently we mean trying out new approaches rather informally in the classroom, without most of the controls characterizing a laboratory experiment, and attempting to assess the effectiveness of these procedures by synthesizing various types of information subjectively. Such experi*en*tation may stem from library research, discussion of teaching methods with others, in-service training and courses taken, urging of supervisors, and systematic theory. Experi*men*tation starts from the same bases, especially library research and theory, but

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by careful advance planning (called experimental design) it maximizes the objectivity of assessment.

Educators endow the terms, "measurement," "evaluation," and "assessment" with various meanings. The last two imply objectives of instruction, well thought out in advance, with carefully prepared, varied and frequent checks upon their attainment. Teachers and specialized personnel attempt to use inventories, self-report devices, projective techniques, questionnaires, rating scales, sociometric procedures, anecdotal records, conferences, recordings, and films in optimum combinations for appraisal of the "whole child" and the entire educational setting.

Evaluation, a more inclusive term than measurement, connotes the making of value judgments, particularly in rating the desirability of educational objectives. Some writers reserve evaluation for this limited use, calling the procedures by which we appraise the growth of individuals with respect to these objectives, "assessment." But in the rest of this article let us adhere to the customary definition that subsumes measurement under evaluation, allocating intuitive, informal judgments of the pupil's progress and aspects of valuing to the latter. In other words, we would call the more objective aspects of evaluation, especially the use of "ability tests," measurement, and the more subjective and intuitive aspects, such as anecdotal records, evaluation; all measurement constitutes evaluation, but not all evaluation should be referred to as measurement. Admittedly, we make this distinction for convenience in the subsequent discussion, though quite properly you may prefer other usages.

Now that we have informal definitions of research and of evaluation, let us look at the interdependency of these two processes. As indicated above, teachers continually modify their methods in order to maximize the probability of attaining desired objectives and try to evaluate pupil growth to determine whether or not the new procedures facilitate this attainment. Clearly, teachers should have reasons other than caprice or desperation for changing their methods, and techniques other than prejudice for evaluating the impact of modifications. Appropriately, the teacher prejudges a method as being feasible and consonant with educational objectives before adopting it, but this value judgment does not insure the method's efficiency. Only periodic evaluation, planned from the beginning so as to minimize prejudice, suffices to determine whether the adopted procedure "works."

In a loose sense, all non-random changes in the treatment of students *result from* research, at least the subjective analysis of one's own experiences, and *constitute* research, for each change rests upon a tentative hypothesis (rather than an assumption) that it will facilitate the attainment of certain educational objectives. The better the modifications fit into a coherent educational philosophy and the more they stem from well controlled research, the greater the likelihood

that they will expedite pupil growth. However, one must not dispense with evaluation, no matter how promising the new method appears. "On-going" evaluation keeps education "dynamic," protecting it from perpetuating errors of judgment that inevitably occur in an area where the probability of making correct decisions lies well below 100 per cent.

Thus far we have confined the discussion to "methods" research—the instituting of changes and the evaluation of their influence upon the achievement of desired objectives. If this type of investigation is well rooted in prior research and systematic theory and includes suitable controls, it can make original contributions. Broadly speaking, we may classify research as suggesting hypotheses, testing *ad hoc* hypotheses (relevant to a specific problem, but apparently not contributing to theory), or testing hypotheses with theoretical implications. As presently conducted, most "research" by teachers at best generates hypotheses, rather than tests them; a little of it involves carefully attacking special problems suggested not by relevant theory but by "practical" exigencies such as the conviction that certain current practices are ineffective. In the opinion of the writer, controlled experimentation firmly grounded in theory and contributing to it receives infinitesimal attention below the college level. Surely, theory-oriented controlled experimentation in the classroom deserves hundreds of times as much support as it now gets.

### Three Planning Situations

Let us look at three illustrations of informal "research" from among the many that might be considered. Later we shall outline a more structured research project.

- Mr. X, supervisor of social studies in a large school system, reads in a professional journal Professor Y's apparently conclusive evidence of change to more democratic attitudes in small groups of male college sophomores following certain procedures. Mr. X and his teachers note the kind of prejudice among some of their students that the professor attacked successfully in the laboratory. They spiritedly discuss the applicability of his principles and procedures to their situations. They consider performing modifications of his experiment in their classrooms but conclude that limitations of time and resources forbid. Therefore, they read about other investigations, particularly those cited by Professor X, and try to reach consensus concerning seemingly applicable procedures. Finally, and quite importantly, they carefully explore possibilities for initial and on-going evaluation of the new methods.

- A group of high school mathematics teachers meets several times to discuss implications of the NEA's monograph, *What Research Says to the Teacher: Teaching High-School Mathematics* (2). Individuals consult some of the 15 references cited and share their findings with one another. Perhaps no general reorientation of teaching methods evolves, but each person gets certain ideas to try out rather informally. He makes these explicit, both in writing and orally, so that others can help him plan the evaluation implied by the notion of

"trying out" an idea. He realizes that continual evaluation need not be haphazard and ultra-subjective if it is incorporated into the plan for curriculum change.

• A few elementary grade teachers meet to devise an objective test of the common unit they have almost completed. In the process of discussing aims and objectives, relative emphases, and level of generality of items, they learn much about teaching procedures and decide henceforth to plan the evaluation of their units at the inception rather than only at the end. Nevertheless, they now construct a test, administer it, perform an item analysis (3), and get together again for postmortem consideration of implications. They infer a great deal concerning mental processes of the students from careful consideration of responses to the various item options and thereby further modify their ideas about content and methods. (Of course, these teachers know full well that objective tests alone do not nearly suffice for evaluation, even of strictly "factual" material.)

The above paragraphs illustrate the interdependency of research utilization and evaluation. As already implied, both "research" and "evaluation" denote various things, from the controlled experiment of the physical scientist and the height measurement of the anthropometrician to the subjective day-by-day experience analysis of the classroom teacher, which some consider research, others evaluation, and many neither. We hear of "action," "service," "cooperative," "flexible," and "on-going" research, the meanings of these adjectives varying from report to report. Often, research by teachers involves getting facts, suggestions, and ideas from written and oral sources, relating these to the teachers' own methods and philosophies, trying new classroom approaches, evaluating their effectiveness, modifying procedures, and re-evaluating.

### Experientation

In keeping with prevalent educational philosophy, teachers continually evaluate on the basis of their experience (which includes knowledge of new research) both objectives and means for attaining these. Objectives must be consonant with the capabilities of the child. Would any teacher conclude that, because of the current shortage of scientists, an objective for all students should be mastery of the differential and integral calculus by the end of the twelfth grade? Likewise, means depend upon philosophical considerations as well as upon the findings of educational psychology and other disciplines; an efficient method may be philosophically unacceptable.

Perceptive, intuitive teachers, unawed by the "authority" of experts, modify and assimilate research conclusions in an unstereotyped manner, incorporating certain elements without prejudice but tentatively, subject to continued evaluation. Many educators hope that controlled experimentation under classroom conditions will increase greatly, but few feel optimistic, especially because of the rising tide of enrollment, with concomitant shortages of staff and resources. Meanwhile, most teachers must borrow research findings, "experiment" intelligently, and evaluate incessantly. From the

expertly analyzed blend of outside material, classroom manipulation and observation, and systematic evaluation should come improved educational experiences for our children.

Severe difficulties in evaluating the influence of new procedures based upon outside research occur, largely because the absence of concurrent control groups confounds the effects of methods with temporal influences. For example, if the present class knows considerably more English grammar at the end of three months than last year's class did, should this difference be ascribed to new techniques, to initial superiority of the current students, to enhanced learning conditions not directly connected with the classroom changes, or to other factors unaccounted for? By using last year's class as the control group, we create this dilemma. While never easy, proving "causation" is especially difficult when suitable controls are absent. To some extent, proper evaluation can substitute for a contemporary control group, as when the teacher knows from tests how the initial knowledge of students this year compares with that of last year's class and how gains of the two groups differ. Even such seemingly intangible aspects as classroom "atmosphere" and morale can be evaluated with moderate success (1). The teacher strives to objectify and quantify evaluation procedures without narrowing their scope unduly; not all subjective judgment can or should be eliminated, but usually its minimization improves over-all evaluation.

## Evaluating a New Method

Recently the writer was privileged to help plan the evaluation of a correctional speech procedure in the seventh grade classes of a university laboratory school. On the basis of their wide experiences, three speech teachers and the principal decided to have student teachers observe unobtrusively the speech of seventh graders in nonspeech classes and give the youngsters written suggestions for improving their diction, volume, pitch, etc. The usual approach might have been to observe all seventh graders, furnish suggestions to those who needed these, and finally evaluate by having staff, student teachers, and perhaps students and/or parents report how well they felt the innovation had "worked."

Instead of adopting the above haphazard evaluation of outcomes, obviously complicated by maturational influences, we set up controls deemed sufficient to make evaluations of outcomes relatively unambiguous. Taking two factors (reported to vs. not reported to, took English first semester vs. took speech first semester) into account separately for boys and girls yielded four *random* groups for each sex: reported to, took English; not reported to, took English; reported to, took speech; not reported to, took speech. At the end of the first semester, each of the students appeared (in random order) to be rated on two aspects of speech by judges who did not know any student's classification. This study continued through the year, those who took English the first semester having speech the second, and vice versa, with intermediate and final evaluations.

The high confidence and enthusiasm of the four persons who devised the

plan for observing the speech of students in their natural habitats and commenting about it conflicted sharply with the negative conclusions of the experiment. Very likely, informal evaluation would not have been precise enough to override initial glowing expectations; one does not want to bury his favorite brain-child without conclusive proof of death.

The structured evaluation described above conserved possible values of the innovation for 50 per cent of the students. By withholding reporting from half of the seventh graders, we obtained data essential for making several crucial comparisons. If the innovation had proved effective, these control students would have deserved extra attention after the experiment. However, they served to show that the considerable expenditure of time and staff required for the reporting procedure *as currently conceived* could be saved henceforth. Certain modifications might produce better results; the speech teachers can explore these on the basis of professional literature and further experimentation.

Research and evaluation go together, being at times virtually interchangeable or even synonymous. The teacher introduces new procedures after analyzing their relevance for his situation and then evaluates their impact upon the students with respect to objectives of instruction. He strives to eliminate many subjective elements from evaluation, while realizing that personal judgment is essential for the synthesis of information and the making of decisions. Ideally, evaluation becomes increasingly objective and quantified, moving toward controlled experimentation.

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CATHERINE M. BRODERICK

# Research in the Use and Purposes of Instructional Materials

**This article examines the status of current research in the use and purposes of instructional materials.**

A CASUAL observation on this topic might be that the area of instructional materials has produced a great deal of research. In the reading field alone, it is estimated, there are more than twenty thousand pieces of research. The *Journal of Educational Research* publishes annual summaries by William S. Gray relating to reading investigations. Non-book instructional materials have opened up a new research field particularly in the past thirty years. While the most recent comprehensive summary in the audio-visual field was contained in the 1950 edition of the *Encyclopedia of Educational Research*, numerous books and periodicals have made an effort to bring together more recent findings. One purpose of the *Audio-Visual Communications Review* is to bring to the attention of the teaching profession research in the whole area of communications. One of the first issues of that magazine in 1953 reviewed the television findings to date. A recent book, the *Audio-Visual Reader* devoted a section to research and also proposed many topics for needed study. A new magazine, *Teaching Tools*, now in its second year presents as a regular feature two double pages of pictorial reporting on recent research in the use of materials.

This article is intended to consider all classroom materials which help the school carry out its responsibility for improving the learning process. It will not differentiate between the more concrete materials commonly called audio-visual materials and the more abstract book materials. It will not treat one group of materials as aids and another as essentials, because the term, "aids," seems to imply the auxiliary and supplementary. Materials are here assumed to be a real and necessary part of all teaching and learning. Materials will not be called supplementary to the tool subjects. The tool subjects are not here assumed to be ends in themselves. Materials and content are two of the means for developing responsible democratic citizens in today's changing world.

## What Research Tells

A check on the investigation concerning the use and purposes of instructional materials shows there are many studies merely attempting to demonstrate the superiority of one type of

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learning material over another. "Should a single textbook or many supplementary books be used?" "What are the better teaching media: audio-visual materials or textbooks?" Many audio-visual studies use films as the materials to be tested. There seem to be comparatively few studies concerned with the use and purposes of field trips, demonstrations, dramatizations, filmstrips, slides, charts, graphs, maps, records, transcriptions, radio programs. Much of the research relating to use and purposes of television has been completed by the military services.

An interesting exception to the usual one-medium experimentation, however, is a study by Witty and Fitzwater[1] in which a combination of materials was used to facilitate the learning going on in the classroom. This reports the average progress made by 27 second grade children in each of six Chicago schools during a semester in which four films were presented following the reading of the associated film reader. One conclusion reached was that the use of motion pictures accompanying reading material provides needed basic experience and fosters the attaining of skills in reading. "It not only leads to clearer grasp of meaning but also enables the pupils to hear the correct pronunciation of words and phrases in a meaningful setting." [2]

William C. Allen has summarized some of the utilization research as follows:

> The use of a variety of materials will lead to greater learning. There is some evidence that films are excellent for initiating a study, that many kinds of materials help the development of a unit and that student-produced materials are effective as summaries and conclusions.[3]

The *Encyclopedia of Educational Research* states that, in harmony with findings of the American Council on Education study, good utilization means that the teacher is acquainted with the materials before he attempts to use them, that the class group is prepared to use the materials and that there is follow-up activity after the materials have been used. [4]

Dale, Finn and Hoban conclude that audio-visual materials properly used can serve the following purposes:

> Supply a concrete basis for conceptual thinking and hence reduce meaningless word-responses of students;
>
> Provide a high degree of interest for students;
>
> Supply the necessary basis for developmental learning and hence make learning more permanent;
>
> Offer reality of experience which stimulates self-activity on the part of pupils;
>
> Develop a continuity of thought;
>
> Contribute to the growth of meaning and hence to the development of vocabulary;
>
> Provide experiences not easily secured by other materials and contribute to the efficiency, depth and variety of learning. [5]

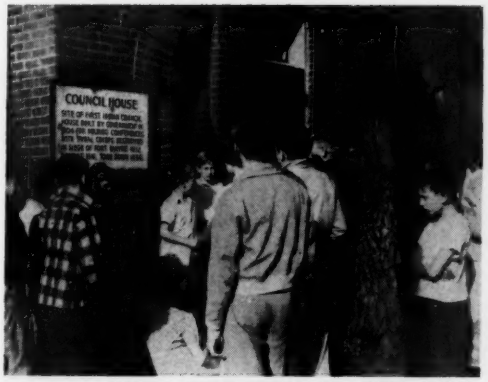
[1] Paul Witty and James P. Fitzwater. "An Experiment with Films, Film-Readers and the Magnetic Sound-Track Projector," *Elementary English* XXX (April 1953), p. 232-41.

[2] *Ibid.*

[3] William C. Allen. "Research Verifies the Value of Audio-Visual Materials," *The Audio-Visual Reader*, ed. James F. Kinder and F. Dean McClusky. Dubuque, Iowa: William C. Brown Co.; 1954. p.331-32.

[4] Edgar Dale, James Finn and Charles F. Hoban, Jr. "Audio-Visual Materials," *Encyclopedia of Educational Research*, ed. Walter S. Monroe. New York: The Macmillan Co.; 1950, p. 92.

[5] *Ibid.*




COURTESY, PUBLIC SCHOOLS, FORT WAYNE, INDIANA.

Extensive research by small committees furnishes material for firsthand reporting at local historical spots.

Many of the studies are disturbing in their evaluation of purposes of instructional materials in terms of only verbal responses on objective tests of factual information. Yet, the *Encyclopedia of Educational Research* points out, "in addition to conveying information [films] are useful in forming proper attitudes and developing critical thinking." There seems to have been little reported research in the latter areas, which are admittedly more difficult to measure. Yet, day by day working in classrooms with teachers and children reveals many interesting examples of very personal attitudinal reactions when the group has a feeling of freedom to work with materials and to think about their use.

Of course, most studies involving instructional materials cite the importance of the role of the teacher in the learning process. Such observations as the following are common:

Materials are not good in and of themselves. Overoptimism is cautioned against.

The effectiveness of the [materials studied] must be expected to vary with the subject taught and with the learning outcome measured.

Effectiveness further depends upon the age and background of the children or group using the materials, the skill and method of presentation and the influence of the teacher.

## Some Questions and Observations

Accepting the fact that the teacher is a key to classroom learning, practical questions to consider might be: What influence did the teacher exert in each of the following actual classroom situations? How did the teacher's own beliefs about the role of instructional materials help bring about these reactions in children? What kinds of reactions did the children have chiefly because of the materials used by sensitive teachers?

As a group of Midwestern ten-year-olds touched the contours on a new plastic three-dimension map of the U. S. A., one said, "The Appalachians aren't really high compared to the Rockies. My dad said he didn't enjoy mountain driving when we went East to Washington, D. C., last summer. I wonder how he would feel if he ever drove west in Colorado." Another said, "I wonder when the pioneers ever would have gotten to the Midwest if the Appalachians had been as high as the Rockies." Another said, "If the Rockies were in the East and the Appalachians were in the West I wonder what national park Fort Wayne would be near."

How was the teacher's acquaintance with the importance of varied learning materials reflected in the following account?

In listening to a phonograph record dramatizing the completion of the first transcontinental railroad and the driving of the golden spike, a junior high student said, "When I shut my eyes and listen, I feel that I am right there in Utah!" Later, that same student moved to the library shelf to pick out the exact story book which the record had dramatized.

What kind of teacher-pupil partici-

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Books, charts, photographs and a pictorial map help students and teacher prepare for a class trip.

pation in the use of materials was helpful in bringing about the identification indicated in the following account?

A sixth grade group was discussing a filmstrip concerning the first voyage of Columbus. The class observed a frame showing Columbus riding horseback in a Spanish city in a triumphal parade celebrating the success of the first trip across the Atlantic Ocean. Some captive Indians whom he had brought back as evidence of reaching the Indies were walking along behind him. One child observed, "I feel sorry for those poor Indians in the parade, the way everyone is staring at them." Another said, "They don't even know what the people are saying."

What makes some school experiences dramatic referents?

A senior high school group was talking over a school journey it had made, while its members were in junior high school, to the Lincoln country of Indiana. They said the most memorable part was the feeling they had had while standing quietly on the land where Abraham Lincoln had once lived, and saying aloud the "Gettysburg Address."

In the April 1955 research issue of *Educational Leadership,* Maurice R. Ahrens observed that changes in curriculum involve first and foremost changes in the thinking of teachers. Perhaps the teachers willing to be involved in experiments with new learning materials were changed and thereby created an improved environment

in which learning could take place.

## Suggested Research

If "relatively few decisions about instructional materials or methods are based upon scientific evidence,"[6] if studies of changes in attitudes and development of critical thinking do not lend themselves easily to scientific research, if the teacher is a key to learning—then perhaps action research in the individual school building and classroom is one means of exploring further the uses and purposes of instructional materials. A school staff which works sensitively with its students, thinking through some ways of expanding and deepening experience through materials, modifying what it does in the light of observation and evaluation is carrying on action research. Such a school staff, after seeing the motion picture, *The Mind's Eye*, which presents some of the experimentation in perception going on at Hanover Institute, may wish to re-examine its total school curriculum in terms of the common experiences the school assumes it is providing.

Other hypotheses can easily be set up by individual staff members and by groups: If I use a wide variety of instructional materials in teaching, then I shall appeal to more individuals by opening up more approaches to learning. If I make it a point to really become acquainted with a number of new learning materials each semester, then I shall feel that teaching is more fun and that learning is a pleasanter experience in my classroom. If our building staff will survey realistically the instructional materials available and those needed in terms of the job we are trying to accomplish, then, perhaps, local production can help fill in the gaps. If I as a materials (or other) consultant am willing and able to try out with teachers new ways of using instructional materials, then perhaps we can develop among us greater understanding of the cooperative part we can play in improving the total learning process.

[6] Stephen M. Corey. "Editorial: Research in Action." *Educational Leadership* XI (May 1954), p. 464.

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ALICE F. HANSEN

# How the Teacher Collects and Uses Evidence

**This article outlines a practical method for the teacher in collecting and using evidence in solving problems in the classroom.**

IT IS NORMAL for problems to exist in the classroom, and their existence does not necessarily indicate that something is wrong or has been poorly done. Every teacher recognizes many problems, whether of a group or of an individual. In some cases, however, he may have difficulty defining a problem even when he recognizes that it exists. Examples of problems frequently expressed are these:

1. How can these children learn to spell accurately in their daily written work?
2. How can retarded children learn to read as well as they should for their ability?
3. How can this one child develop a number sense which he apparently lacks?
4. How can these gifted children be challenged to work up to their capacity?
5. Why is this child behaving as he does and what can be done to help him?

The classroom teacher is constantly confronted with problems related to selection of learning experiences, to organization of activities, and to methods of instructional procedures for more effective learning by children. Whether aware of it or not, the teacher is daily engaged in a kind of classroom research. He plays a leading role in evaluation, for it is impossible to separate evaluation from the total learning process. He is continually formulating tentative hypotheses based upon observation and examination, then testing these hypotheses by means of the collection and inspection of more complete data, arriving at conclusions which determine a course of action that validates or invalidates the original hypotheses.

Analysis of child growth and learning progress is continually being made by the teacher. It is important to make the analysis logical. Logical analysis of child growth and learning progress requires that the classroom teacher shall establish and follow certain definite procedures.

**I. Establish criteria.** Although the teacher may start by sensing a problem, it is his criteria, stated or not, which permit him to define the problem. "What skills, abilities, habits and attitudes do I expect these children to practice as a result of my teaching them?" Selection of criteria is based upon one's educational philosophy, knowledge of child development and psychology of learning, experiences with children, and community ideals. The criteria selected "imply the kinds of observations to be made and provide

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a base for judgments" to be determined.[1]

Criteria may well be defined in terms of behavior patterns which evidence certain skills, abilities, habits, attitudes and understanding desired. Behavior patterns are in operation outside the school as well as in it, and are therefore not always readily and easily discernible. Emphasis is placed upon what the child *does* do, not what he can do. These are examples of behavior patterns which may be desired:

1. The child spells accurately in daily written work. (skills, habits)
2. The child participates constructively in oral discussion. (abilities)
3. The child gets along well with others and is liked and respected by them. (attitudes, skills)
4. The child practices good health habits. (understandings, habits)
5. The child makes effective use of the library. (skills)

Each of these broadly stated patterns should be broken down into specific patterns to be looked for. Specifics for the first criterion might be:

1. The child spells correctly the most common words he has occasion to use in daily written work.
2. He makes effective use of the dictionary for the spelling of a word he does not know.
3. He is continually learning to spell new words.
4. He uses an effective method for studying the spelling of new words.
5. He regularly proofreads his written work, recognizes and corrects his own spelling errors.

Defining specific behavior patterns is of value to the teacher for these reasons:

1. This practice tends to improve the selection of learning experiences to promote the type of behavior desired.
2. It helps to organize learning situations in some kind of program to facilitate this behavior.
3. It assists the teacher in evaluating whether or not the program has succeeded in these respects.

The second major step in evaluation of pupil progress comes after the classroom teacher has asked himself these questions: "What characteristic, ability, understanding, skill, or combination thereof, do I want to note in pupils at this time? What behavior patterns clearly evidence this characteristic, ability, understanding, or skill?"[2] We cannot observe in general, only specifically. Trying to look in all directions at the same time merely results in a blurred picture and serves no good purpose.

**II. Collect data.** The second major step in evaluation is an area much neglected. It consists largely of testing and observing. Too often the busy teacher relies solely upon hastily constructed paper and pencil tests which merely record behavior in a unique situation. By applying practices of good test construction it is possible for the teacher to obtain a certain type of evidence which is fairly valid, reliable and objective. It is important to collect data not only regarding pupil knowledge but also regarding pupil ability to perform in a dynamic, not a conforming, way, to apply principles, see relationships, select relevant ideas, make comparisons, determine trends, and predict outcomes. There are few commercial tests which are useful in collecting data re-

[1] C. W. Harris, "Appraisal of a School," *Journal of Educational Research* 41:172-182; November 1947. Madison, Wisconsin: Dembar Publications.

[2] Eugene R. Smith and Ralph W. Tyler, *Appraising and Recording Student Progress*. New York: Harper and Brothers, 1942.

garding such difficult-to-measure skills, attitudes and understandings. Moreover, each learning experience is unique, and there is considerable value to the teacher in constructing a carefully planned test in that it forces him to re-examine his purposes. "What understandings, skills, etc., should these children have at this time as a result of this learning experience?"

A test may take the form of annotated observation. In determining to what extent a child makes effective use of the library, for example, the teacher may turn pupils loose in the school library with a problem which may have arisen in social studies or science. If, after careful observation on the part of the teacher, he and the children recognize the need for further instruction in the use of library materials, future activities are planned together. Thus purposeful learning situations are produced to facilitate the kind of behavior deemed desirable by teacher and pupils. Later, similar research periods in the library may be conducted and evaluated, with related activities planned as needed, until such time as teacher and pupils feel that the criterion has been achieved. Evaluation is a continuous process which accompanies learning experiences, and much of it can be done by teacher and pupils jointly.

Various measurement devices such as teacher-made tests, standard achievement and diagnostic tests, mental and physical tests may be used. In addition to these, the teacher can employ interest inventories and sociograms. The teacher may believe he knows his pupils so well that a sociogram is unnecessary, but it is surprising what additional insight is often obtained by means of a sociogram. Pupils should be informed why they are asked for their choices, and choices made by children should then actually be considered in some immediate planned activity.[3] It is well to plot a sociogram early in the year and then again about six months later to determine what progress has been made in social adjustment after the teacher and the pupils have tried to improve conditions.

Writing of autobiographies by pupils early in the school year may reveal the language arts needs of children. It may also yield much pertinent information regarding cultural-social background and social-emotional needs. The keeping of folders containing representative work of pupils may furnish evidence that speaks for itself to teachers, pupils and parents. Periodical examination of their own work in folders is enjoyed by pupils and may assist them in evaluating their own progress. Writing of report card comments by pupils prior to issuance of cards may be an effective device for collecting evidence regarding a pupil's ability to determine his own needs and to evaluate his progress.

Observation of pupil behavior is helpful to the teacher if recorded systematically and objectively by means of anecdotal records. Providing learning activities which permit the teacher to observe pupil behavior is essential, although much information can be gleaned by means of observation on the playground and in and about the school. Casual visiting with pupils be-

[3] Helen Hall Jennings, "Sociometric Grouping in Relation to Child Development," in *Fostering Mental Health in Our Schools*. Association for Supervision and Curriculum Development, 1950 Yearbook. Washington, D. C.: the Association, a department of the National Education Association, 1950. p. 203.

fore and after school, although frowned upon by many administrators and sometimes not feasible, may meet a real need of pupils and teachers. In recording comments it is imperative that remarks be kept objective, be specific and extend over a period of time. Interpretation or evaluation should not enter into the recording.[4]

For children with serious or unusual problems a case study written by the teacher is most helpful. The writing of but one case study a year may well be beneficial, not only to the individual child concerned, but because it may help the teacher acquire a greater awareness of the problems of other children.

Teacher-parent conferences and teacher-pupil conferences supply much useful data if there is first established good rapport and if the teacher can refrain from doing most of the talking. Well kept cumulative records furnish another source of useful information.

**III. Interpret data.** After the evidence has been collected by the teacher, behavior must be compared with behavior patterns specified as desirable. Direction of behavior change is as important as the amount of change. This interpretation of data, or evaluation of pupil progress, is particularly valuable in that it provides information basic to effective guidance. Whenever possible, pupils should be permitted to share in the interpretation of data and planning of future activities. "What did our work today show us that we need to do?" It is well to remember that pupils must obtain some satisfaction in performance of activities, in recognizing their needs and in planning for them.

**IV. Plan course of action.** Following the interpretation of data, the teacher elaborates upon the original tentative hypothesis, or projects another hypothesis, planning a course of action to bring about the desired results, thereby testing the hypothesis. Should it prove invalid, the teacher re-examines the evidence, collects new data, revises the hypothesis, and plans a different course of action.

Some problems are so difficult and of such long duration that the teacher may never arrive at a solution. Clinical help may be needed to plan a course of action, which may or may not prove successful.

Although logical analysis of child growth and learning progress is continually being conducted by the teacher, more teachers should be encouraged to experiment in the classroom with new ideas, or ideas new to them. Experimental practices should not be confined to the laboratory school. The same steps apply in trying out a different procedure in teaching. It might be well, however, to keep in mind these suggestions:

1. Enlist the cooperation of principal or supervisor before experimenting.
2. Wherever possible, include children in planning and evaluating proposed activities.
3. Do not become discouraged if results are not satisfactory or immediate, for failure often precedes success.

The following is a brief account of typical classroom research conducted in an effort to determine an effective method of teaching spelling in a class of fifth graders in an Oakland public school. It does not pretend to be lab-

[4] Helen Bieker, "Using Anecdotal Records to Know the Child," *ibid.* p. 184.

oratory research but is cited as an example of the kind of modified research the classroom teacher can conduct.

1. Sensing problem, which was defined in light of criteria established. Projecting tentative hypothesis.
2. Collecting data:
   a. Examining written work, observing habits relating to spelling. Administering *Stanford Achievement Test in Spelling, Form D.*
3. Interpreting data and elaborating upon original hypothesis:
   a. Many children in this group have not been successful in learning to spell through use of traditional methods previously tried.
   b. Spelling may improve if it becomes functional and individualized.
4. Planning course of action (children participating) and instituting activities:
   a. Develop interest in spelling and "spelling consciousness."
   b. Make learning of spelling words an individual matter, encouraging each child to study words difficult for him. Each keeps record of common words misspelled in his daily work. (Words are correctly written on child's papers, with attention given to individual differences. Good spellers consult dictionary to record words.)
   c. Teach and emphasize proofreading.
   d. Publish class newspaper, *entire* editing to be done by pupils.
   e. Give special help to children having difficulty with phonetic skills in spelling and in reading.
   f. Teach word structure and analysis.
   g. Teach dictionary skills. Encourage "dictionary habit."
   h. Present method of independent study but permit each child to use method most effective for him, including Fernald kinesthetic method.[5]
   i. Encourage each child to progress as rapidly as possible. Employ word lists, e. g., Dolch list of 2000 words, demons for each grade, Hildreth list based on Rinsland,[6] graded lists of words from California state test, words used in social studies-science for advanced spellers.
   j. Employ self-checking with partners.
5. Collecting new data to test hypothesis:
   a. Repeated observation and examination of children's spelling and related habits.
   b. Administering *Stanford Achievement Test in Spelling, Form G.*
      (1) Results in September 1955, in spelling achievement age ranged from 7 years 8 months to 11 years 10 months. (median: 9 years 7 months)
      (2) Results four months later ranged 8 years 8 months to 13 years 7 months. (median: 10 years 6 months)
6. Interpreting new data:
   a. Experimental method produced desired results in spelling and improved written work in general.
   b. Better work habits, greater independence and interest resulted.
   c. Reading disability cases continue to require concentrated help.
7. Planning future action:
   a. Advanced spelling for group of eight children who tested 11 years 7 months to 13 years 7 months
      (1) Exemption from formal spelling.
      (2) Keeping of individual composition book to include one composition a week on subject of choice and list of twenty words of pupil's choice learned each week. Compositions to be used in yearbook, scrapbook, or newspaper.
   b. Continued use of individualized spelling method by sixteen children who tested 10 years 1 month to 11 years 7 months.
   c. Concentrated supervised work with nine children who tested below 10 years 0 months. (All groupings flexible.)

[5] Grace M. Fernald, *Remedial Techniques in Basic School Subjects.* Chapter 13. New York: McGraw-Hill Company, 1943.

[6] Gertrude Hildreth, *Teaching Spelling.* New York: Henry Holt and Company, 1955.

CLIFFORD BEBELL

# Teaching Is Research

**"Research has sometimes been called the way in which a profession learns. . . Each teacher, as he teaches, is therefore making his unique contribution to the progress of educational knowledge."**

RESEARCH is a word which frightens many school people. It is often thought of as somewhat foreign to the concerns and abilities of most members of the educational profession. Many persons have a picture of the research specialist engrossed with his computing machines, in his maze of statistics, and his standardized tests. Such a person is considered to be in some way different, in some way special or even peculiar.

The truth is quite the opposite. For every person who is buried in a mass of technical intricacies, there are countless others whose approach is more nearly one of common sense. For every research specialist, there is a host of field educators who are engaged in continuous examination and re-examination of their practices. In fact, it is possible to say that all members of the educational profession do research. They may not think of their activity as research; indeed, they may actively dispute anyone who does call it research. Research it is, nonetheless, whether they think of it as experimentation, trial and error, or self-improvement.

The foregoing remarks may sound strange to Miss Jones who teaches kindergarten at Southside Elementary School, or Mr. Smith who has been guiding the students of Jefferson High School through the mysteries of second-year algebra for much of his professional life. Such teachers are more interested in boys and girls, and in ways of helping boys and girls, than they are in generalizations and theories. They are impatient with abstractions, when so many problems cry out for immediate decision on their part. They understandably ask, "How is my teaching related to research?"

## Diagnosis

Diagnosis is one way in which the characteristics of good research are also those of good teaching. Mrs. Brown tests her first grade students to discover if they are ready to read. Mr. Duclos uses the Foreign Language Prognosis Test to determine if high school students have an aptitude for French. Mr. Green, the boys' counselor at Washington High School, attempts to identify the interests and abilities of students in order to help them with their educational and vocational plans. These educators are engaging in the

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serious and scientific study of the characteristics of boys and girls. They are gathering information in a fashion which is similar to that found in a research study.

The researcher wants to know how the characteristics of students and the conditions of the classroom affect learning. So does the teacher. Both the teacher and the research specialist recognize that they must study people and situations thoroughly in order that the influence of one upon the other may be identified. The case study, the achievement test, and observational techniques are legitimate methods of investigation, as well as important tools of teaching. In fact, when the teacher is engaged in thoughtful diagnosis, he is in effect carrying out an important step in the scientific study of educational problems.

## Data Gathering

Teaching and research are both activities in which much data gathering occurs. The cumulative record folder is a well-known fixture in most schools. Test scores, anecdotal records, and reports to parents represent ways in which a teacher adds to the vast body of information collected on each student. This assiduous accumulation of data is a characteristic of public education, and is also an ever-present task confronting those who do research.

Perhaps no distinction should be made between diagnosis and data-gathering, both of which involve the collection of information. The former emphasizes the act of studying students and situations, however, while the latter focuses upon techniques of operation. The techniques of amassing information about the students and their environment are constantly employed by the teacher. Even the act of observing boys and girls in the classroom is a data-gathering procedure. In consequence, over a period of time most educators have accumulated a vast store of data relevant to various aspects of instruction. This achievement is not unlike the activity of Charles Darwin who spent so many years studying variations in animals and plants before he ever permitted himself the luxury of speculating upon the meaning of his evidence. Data gathering represents an important way in which the daily work of the teacher is part of the process of research.

## Continuous Change

An essential element of research is the way in which perception and knowledge are constantly growing and widening. This is also an essential element of good teaching. Mary Black may use a recitation method and required readings in her social studies class. She does this because the importance of covering the content of the course is foremost in her mind. Possibly she experiments with other methods, such as cooperatively planned projects, as she considers other objectives —students' attitudes or critical thinking. Such a change constitutes a revision of earlier ideas in the light of a wider viewpoint.

The researcher recognizes that there is no such thing as certainty, and that his understanding of any idea at any given moment is necessarily imperfect. He tests and retests beliefs continually against the evidence he has collected, recognizing the tentative and changing

quality of his ideas. The teacher also knows that continuous examination and re-examination of his practices are imposed upon him by changing circumstances. His acceptance of this challenge marks him as a person who is using the approach of research in his everyday practices.

### Problem Solving

Problem solving represents another area which is central to the concerns of both the researcher and the field educator. Sue Johnson helps her first graders recognize their problems in getting along with friends and assists them in solving these. Don Wilson uses a similar approach in teaching industrial arts. When a student, for example, wishes to make a gun rack in the shop, the teacher knows that the boy confronts a problem. Mr. Wilson helps him clarify it, think through various ways of working, make a plan of procedure and arrive at a successful conclusion. This is problem solving on the part of both the teacher and the student. It is also an experience for them in a fundamental activity of research.

The whole area of research is itself one vast problem—how to know a field so completely that decisions and actions can be carried out with complete assurance of success. Within this great problem are many simpler problems, which are attacked by the researcher in piecemeal fashion. He formulates beliefs, and tries them out to see if they are correct. He then builds on them to reach broader and more important concepts. This process also describes what the teacher does when solving his own problems, and what he does to help his students learn the same procedure. The activities of research represent what teachers and indeed all thinking persons do in meeting the difficulties of daily life.

### Objectives and Goals

Both teachers and research specialists are educators first and foremost. As such they share a joint concern, either directly or indirectly, with ways and means of helping young people to achieve important goals. Mr. Johnson wants his students to become healthy and happy through physical education. He also would like to see them develop habits and attitudes of good sportsmanship. Miss Williams teaches boys and girls to read, but she also wants them to learn good work habits, good citizenship and good feelings for other people. Every teacher is concerned with a variety of goals and is striving to make as much progress toward as many of them as possible.

The objectives of the teacher are also the business of research. The investigator and the field educator may move in somewhat separate spheres, but they work on joint problems. The goals of public education decide what will be given primary emphasis in both research and the classroom. The reseacher examines the relation of various methods and plans to the objectives of the schools. At the same time, the teacher is investigating the same questions. There is a continuous and intimate relationship between research and teaching regarding the problem of how best to help young people reach their goals.

### Quest for Knowledge

A quest for knowledge is central to

education, and is a prime motivation of both researchers and field educators. Mr. Roberts decided to become a high school teacher because his intellectual curiosity developed in him a passionate interest in physics. Mrs. Stevens is an outstanding fourth-grade teacher because her constant desire to know more about people leads her to help students understand one another better. This search for more knowledge is continuously present in both the research specialist and the creative teacher.

The way in which a person exhibits a thirst for knowledge will often encourage the same attitude in others. The teacher wishes to generate in young people the same desire to learn and to continue learning the rest of their lives that he feels in himself. The extent to which he succeeds in this goal is the extent to which he practices what he preaches. As a result, the necessity for speaking out through his own practices makes of every teacher a researcher.

### Growth of Professional Knowledge

Finally, teaching and research share jointly in the problem of the growth of educational knowledge. Education deals with the task of helping young people develop into mature citizens. When Jim Young and Sally White and Martha Field teach they acquire experience in how to do this job. They learn techniques which seem to work—techniques of classroom management, of motivation, of evaluation. They come to recognize situations and conditions which are conducive to learning, as well as those which are not. They acquire a large body of beliefs and concepts, which constitute a kind of professional consensus. Their experience and judgment make up the raw material with which researchers deal.

Research has sometimes been called the way in which a profession learns. Those who are most closely concerned with research in education are greatly dependent upon the opinions and judgments of members of that profession. Witness, for example, the many questionnaire studies which attempt to mine this storehouse of understanding. Each educator, as he gains insight and knowledge, is adding his bit to the sum total of professional learning. Educational research confronts a job of collecting, organizing, and interpreting ideas which have been developed through classroom experience. Each teacher, as he teaches, is therefore making his unique contribution to the progress of educational knowledge.

MARGARET M. STUCKEY

# Teachers Look at TEACHERS MEETINGS

**"Teachers meetings"—what do teachers really think of them? This article gives findings in one study of this prevalent supervisory technique.**

OF ALL supervisory techniques one of the most common, and one of the most likely to be reluctantly tolerated or even resented by teachers, is the teachers meeting. There are some good reasons for teachers' attitudes toward this supervisory technique and at the same time some valid reasons why it continues to endure.

The past history of the teachers meeting in many communities has been that the supervisor scheduled the time and place of the meeting, selected the content, prepared a more or less informed, scholarly presentation, delivered it, asked half-heartedly for comments and closed the meeting when few were offered. The time was usually after the close of the school day. The place was some central point in the school system and the topic might or might not be of real concern to anyone but the supervisor.

Teachers can hardly be blamed for a rather general lack of enthusiasm about attending such meetings. Indeed sometimes an unwritten code of behavior kept all but the uninitiated silent at such meetings in order that the sessions might be terminated as quickly as possible. An "eager beaver" who felt stimulated to ask a question or enter into a professional discussion with the supervisor soon learned that this must be done personally *after* the meeting was dismissed—*if at all*—unless he or she was willing to exist in a climate of disapproval on the part of co-workers.

In spite of such unfavorable conditions many good meetings have contributed much to the in-service education of teachers. This is due, undoubtedly, to the really fine supervisors who have understood some of the problems confronting both beginning and experienced teachers and have been able to offer some concrete, helpful suggestions. How much more might have been accomplished in a more informal atmosphere of free discussion, one can hardly say.

With the rise of the principles of group dynamics and "democratic" supervision many supervisors have tried to transform the teachers meeting into an opportunity for exploring problems together and for sharing experiences. There is a tendency for the supervisor to be present as a resource person while the meeting is conducted by a non-status person. In some instances, the time, the place and the agenda are de-

*Margaret M. Stuckey is director of junior high school instruction, Public Schools, Passaic, New Jersey.*

termined by the group or by a steering committee of its own selection. Whenever possible, meetings are held wholly or partially on school time. The supervisor, as a resource person, is resourceful enough to provide a convenient and comfortable meeting place (with chairs large enough for adults!), some simple refreshments *and* some ash trays.

Whenever a supervisor attempts to achieve change in the use of an established supervisory technique he must realize that such changes come gradually, almost imperceptibly, at first. It is necessary to take into account the normal resistance to change—and such resistance *is* normal—even when the change is believed to be in the direction of improvement. In a situation where teachers meetings have generally followed the old pattern, as described here, one cannot expect a free expression of ideas or a free exchange of experiences to leap into being. It may take years of patient encouragement and awkward periods of silence at meetings, even on the part of the supervisor, before former spectators are ready and willing to become participants.

Sharp says,[1] "The traditional teacher is very likely to view curriculum meetings—as 'a lot of talk that gets nowhere.'—He tends to believe that for every problem there exists an answer. —He fails to see that before a problem can be solved it must be defined and that the quickest way to define a problem is to bring together all those involved so that all aspects of it may be seen. A corollary to this is that a problem involving a group can only be solved by the group. It cannot be solved for them by others." Believing wholeheartedly in this last statement, the director of junior high school instruction has tried in the three years of the present curriculum study in Passaic's junior high schools to change the character and improve the conduct of meetings.

It is not always possible to bring together "*all* those concerned." Honest attempts have been made, however, to bring together those whose concern with various problems was sufficiently deep to cause them to be willing to meet to seek ways of working on these concerns. Meetings were no longer called simply because it was Tuesday, or only because the director of instruction felt a deep concern about some problem. The development of nonstatus leadership was encouraged. Free flow of ideas and broad participation of members were fostered. The director of instruction felt that progress had been made in these directions but did the teachers think so? Were they aware of the changing pattern of their meetings?

To test the teachers' perceptions of these changes, the director of instruction sent out a brief questionnaire to 48 teachers of academic subjects who would normally attend meetings called by the director of instruction.

A copy of the instrument and a report of the results of checking it follow:

[1] George Sharp. *Curiculum Development As Re-education of the Teacher.* New York: Bureau of Publications, Teachers College, Columbia University; 1952. p. 55.

## Questionnaire to Academic Teachers
## Passiac, N.J., Junior High Schools

To the Teachers:

Your cooperation is solicited in answering this questionnaire. *Do not sign your name.*

We want to know how *you*, as an individual, view meetings held by the director of instruction today as compared with such meetings held some years ago. Situations will vary for different persons so please answer in terms of the meetings then and now *as they appear to you.*

Topic: Teachers Meetings Held by Director of Junior High School Instruction.

Directions: Check Column 1 if you think the situation described was more common 10 years ago than now.

Check Column 2 if you think the situation described is more common now than 10 years ago.

Check Column 3 if you feel no appreciable change has taken place over the years.

| | 1<br>More common 10 yrs. ago | 2<br>More common today | 3<br>No appreciable change |
|---|---|---|---|
| I. Number of meetings attended: | | | |
| More | 9 | 35 | 1 |
| II. Bases for grouping at meetings you attend: | | | |
| Grade levels | 32 | 3 | 4 |
| Subject areas | 18 | 19 | 3 |
| Appointed committees | 8 | 24 | 5 |
| Voluntary committees | 0 | 24 | 3 |
| Persons with common interests, concerns or problems | 2 | 29 | 5 |
| Total JHS personnel (city-wide) | 3 | 27 | 4 |
| III. Attendance at meetings: | | | |
| Voluntary | 0 | 15 | 8 |
| Required | 18 | 6 | 19 |
| Few persons excused | 13 | 5 | 7 |
| Readily excused | 0 | 14 | 4 |
| IV. Apparent purposes of meetings: | | | |
| To discover common interests, concerns | 0 | 30 | 4 |
| To discuss ways of working together on common interests, concerns, problems | 1 | 33 | 5 |
| To tell teachers how and what to teach | 35 | 1 | 3 |

| | | | |
|---|---|---|---|
| To inform teachers about rules | 21 | 0 | 4 |
| To inform teachers about or demonstrate new techniques | 14 | 14 | 8 |
| To share experiences | 1 | 29 | 4 |

V. Conduct of meetings:

| | | | |
|---|---|---|---|
| A. Leadership: | | | |
| In hands of director of instruction | 29 | 0 | 12 |
| Provided by classroom teacher | 0 | 29 | 1 |
| Moving from person to person | 1 | 16 | 3 |
| Strongly apparent | 12 | 5 | 6 |
| Present but unobtrusive | 0 | 25 | 1 |
| Attempts made to develop leadership in group | 0 | 32 | 1 |
| B. Participation by members of group: | | | |
| Very little | 22 | 1 | 4 |
| Some | 4 | 8 | 3 |
| Rather general | 0 | 32 | 4 |
| Comments always directed to leader | 18 | 1 | 4 |
| Comments usually directed to leader | 10 | 11 | 10 |
| Interchange among members of group | 0 | 32 | 3 |

VI. Viewing as a whole the last few meetings you have attended, how would you evaluate them?

| | |
|---|---|
| Of no value | 1 |
| Of slight value | 8 |
| Of medium value | 16 |
| Of considerable value | 16 |
| Of great value | 5 |

VII. If the last few meetings you attended were very uneven in value, check here 9.

Please check below

I am a member of one or more of the presently operating committees:

| | |
|---|---|
| Yes | 39 |
| No | 8 |

## Interpretation of Results

Apparently the teachers perceive:

1. A trend away from grade level meetings and in the direction of meetings of committees, groups with common interests, concerns and problems and toward city-wide, total junior high school meetings which cross departmental lines in an attempt to interest all in a program of curriculum study.

2. No marked change in regard to meetings centered around subject areas.

3. Some trend toward voluntary membership on committees and voluntary attendance at meetings. There still exists, however, a disbelief that there is a complete absence of coercion. [*NOTE:* This feeling is probably justified. Some principals do exert pressures (subtle or otherwise). Also, the

long history of required attendance is a potent factor. It has not been possible to move too fast in the direction of completely voluntary membership and participation for fear of setting up comparisons with other levels of the school system where attendance is still required.]

4. A trend toward changed purposes of meetings. Many meetings in past years were for the dispensing of information about rules and about what and how to teach. More recently the purposes have been (a) to discover common interests, concerns and problems (b) to discuss ways of working on these and (c) to share experiences. [*NOTE:* It was good to see that teachers realize that all through the years attempts have been made to acquaint them with new techniques and to demonstrate their use as a part of the in-service education program.]

5. A trend toward a newer concept of leadership—that such leadership does not always reside with status personnel, that attempts are being made to discover and utilize latent leadership potential and to provide opportunities for the development of leadership skills in many persons.

6. A trend toward participation by status leaders as resource persons rather than as oracles.

7. A trend toward general participation by group members with much of the discussion passing from member to member. However, there is still a noticeable tendency to direct comments to status leaders in the group.

8. A sincere attempt to operate democratically with a real respect for the beliefs and opinions of all.

9. A belief in the value of group process and an attempt to develop skill in using it.

10. A regard for teacher morale and security.

11. An honest belief in the value of the experimental approach to curriculum change.

Because the junior high school teachers in Passaic do perceive that changes have taken place in the character and conduct of teachers meetings, they are now less reluctant to attend these meetings. Whenever possible, meetings are held at least partially on school time, refreshments are served, smoking is permitted, and a comfortable meeting place is provided. Some meetings are held in the individual buildings, and some at the administration building, which is rather centrally located and provides ample parking space.

Our sincere and continuing effort will be directed toward making teachers meetings more palatable and better designed for meeting the in-service needs of teachers.

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# Uniting Forces to Improve Education

Column Editor: H. Gordon Hullfish
Professor of Education
The Ohio State University
Columbus, Ohio

*There are as many ways to run a school as there are to skin a cat. Some of these ways, so far as schools are concerned, seem to be better than others; at least, this is what school people generally have come to believe. And, whatever the pattern, the notion that what is involved is a co-operative undertaking of responsible people has appeared to gain widespread support in recent years. But perhaps this is a notion found only in textbooks and articles, heard about only in speeches and in conferences. The real situation, the school itself, may be something else again.*

*This unhappy speculation was stirred by what is printed below. This statement of regulations for a small school (developed in 1955) came to my desk weeks ago. I have finally decided that I should share it with others. I present it without comment, unless the title, for which I hope I may be forgiven, may seem a bit cryptic.*

—H. Gordon Hullfish, *professor of education, The Ohio State University, Columbus, Ohio.*

## HUMnnnnnnn . . . . . !

School Regulations
Regarding
Standards of Conduct and Discipline
by
Principal

"Study to shew thyself approved unto God, a workman that needeth not to be ashamed, rightly dividing the word of truth." (*2 Tim. 2:15*)

The motto of (*blank*) School is "Petimus, Credimus"—"We Seek, We Trust." We seek to inculcate into our pupils a desire for a well-rounded education, and we seek to satisfy that desire. In all our work and play, in personal life and public relations, we seek to be loyal to Christ our Savior. We trust the Bible as the inspired Word of God, the Lord Christ as the only Hope of the World, and His gospel as the solution to the problems of our school.

Prayer of each teacher: "Open thou mine eyes, that I may behold wondrous things out of thy law." (*Ps. 119:18.*)

One Rule: *DO RIGHT*

1. Teachers shall have the ringing of preliminary bells at 8:50 A.M. and at 12:50 P.M. so that the children may take care of miscellaneous items before classes begin.

2. Teachers shall ask all children to remain on the school ground from the

time they arrive until the time of the departure of their buses unless they are given permission to leave by the teacher or the principal.

3. Teachers shall exercise complete authority over any pupil who disturbs the tenure of the school while he is being transported to and/or from school.

4. The principal or any teacher shall not return any child to the child's home during school hours because of illness unless the child has a compelling reason which makes the trip both logical and necessary.

5. Teachers shall insist that all pupils be present ten minutes before the opening of school each day.

6. Teachers shall supervise the loading and the unloading of the school buses.

7. Teachers shall supervise the play activities of the children on the playground and/or in the classrooms.

8. Any salesman who interferes with the hum of activity within the classrooms without the permission of the Principal or the County Superintendent of Schools shall be earmarked as an impostor.

9. Teachers shall exercise precautionary measures and common sense in the manipulation of corporal punishment whenever corporal punishment is found to be necessary. It is very expedient to have a witness.

10. Any teacher shall report to the Principal any offender who makes any statement which berates the prestige of a teacher in the school.

11. Teachers shall arrange the children uniformly for play according to size as much as possible.

12. Teachers shall expect all children to play in an orderly and becoming manner. All of the children should refrain from kicking, shoving, pushing and tripping while they are at play.

13. Teachers shall encourage the children not to overdo the privilege of going to the rest rooms during class hours.

14. Teachers shall ask all children to walk, not to run, while they are traveling in the classrooms or to and from the school buses.

15. Teachers shall require all children to refrain from the use of filthy and profane language.

16. Teachers shall not permit the reading of any comic books in regard to killing or to sex.

17. Any teacher shall report to the Principal any unsanitary conditions found to exist in the rest rooms.

18. A teacher shall report any unsatisfactory progress or any unsatisfactory conduct to the parents of a child whenever such report is thought to motivate the learning situation.

19. Teachers shall report to the Principal any neglect of the custodian or any deficiency of the heating equipment in the classrooms.

20. Teachers shall not permit the dribbling of balls or the jumping of ropes in the classrooms.

21. Any child shall not be permitted to do anything in the classrooms which interferes with the hum of activity.

22. Ice skating shall not be permitted on concrete surfaces.

23. Teachers shall insist that all children refrain from the use of tobacco while they are in the teachers' charge.

24. The Principal and the teachers shall not compromise with any injustice when truth and right are in jeopardy.

25. Members of the teaching staff shall encourage the children to choose the harder right instead of the easier wrong, and never to be content with a half truth when the whole truth can be won.

Signature .....
(Primary Teacher)

Signature .....
(Principal)

Signature .....
(County Superintendent of Schools)

# Curriculum News and Bulletins

Column Editor: Galen Saylor
Chairman, Department of Secondary Education
University of Nebraska
Lincoln 8, Nebraska

• The Museum Division of the Oak Ridge Nuclear Studies has prepared a traveling exhibit on the atomic world for showing at high school assembly programs. The exhibit, labeled "This Atomic World," is designed to stimulate a deeper interest in the peacetime uses of atomic energy. The exhibit is usually in charge of a staff member of the Museum Division, and he utilizes exhibits and demonstration equipment to present in simple language the fundamentals of atomic energy, how it compares with other types of energy, how atomic energy is released, and how it may be used in agriculture, industry, and other fields. Illustrative charts, panels, models and equipment play important roles in making the demonstration as intriguing as it is educational. The exhibit is available to secondary schools throughout the nation and information about it may be obtained by writing to the Division, Post Office Box 117, Oak Ridge, Tennessee.

• A group of teachers of the Van Ness Elementary School, Washington, D. C., in conjunction with the Department of Neuro-psychiatry of Freedmen's Hospital, has been carrying on an interesting study of the emotional problems of elementary school children. **Nelson Burke,** who is chairman of the child study group, has prepared a short report on the nature of the study and some of the results achieved to date. Since the establishment of the joint committee in April of 1954, it has had 15 cases under study. The purpose of the study is to gain a better understanding of the contribution the school as a social agency can make in effecting better adjustments in youngsters who have emotional problems. The project is a cooperative effort of social workers, teachers, psychiatrists and psychologists.

• As a part of its in-service education program, the public schools of Decatur, Alabama, have for the past three years been engaged in a program of child study. **O. S. Hagerman,** supervisor of instruction, reports that interest has been high, and the teachers state that they have found the study to be both interesting and valuable.

• The Minneapolis Public Schools are now in the third year of a city-wide project that will result in the publication of a guide for the teaching of social studies. Eight committees of teachers have been engaged in an intensive study of the whole area of the social studies, utilizing needs and problems indicated by teachers and principals throughout the entire 13 grades of the school system as a basis for their work. The studies made by the com-

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mittees are incorporated into tentative reports, which include recommendations relative to the content and nature of the guide. These are submitted to building faculties for discussion and comment. Utilizing the recommendations and comments of the staff of the entire school system, final reports are made. These will become the basis for the actual preparation of the guide itself. **Frances M. Martin,** consultant in curriculum of the Minneapolis Schools, believes that this process has been fruitful because it has resulted in growth on the part of the teachers participating in the study and it gives teachers in a large city school the opportunity to judge and evaluate plans for curriculum revision as the study proceeds rather than waiting until the guide is completed and handed to them as a finished document.

### Recent Curriculum Bulletins

Not many curriculum bulletins and school publications dealing with our special theme for this month's issue, "The Role of Research and Evaluation," have come to the attention of the editor of this column, but we do have a fine collection of publications to list this month.

• Kansas City Public Schools, ***Research in Action: Nutrition Education, The Second Year.*** Kansas City, Missouri: the Schools, 1955, 27 p. (offset).

The purpose of this three-year action research project in Kansas City is to develop programs of nutrition education in the sixth and seventh grades that will influence the food habits of

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boys and girls. This interim report is concerned with the second year of the three-year study and is principally an account of the programs developed by seventh grade teachers. The report is detailed and it should be especially valuable to those interested in action research, as well as to teachers of homemaking.

• Nebraska State Department of Education: ***A Guide for Evaluating and Improving Nebraska Elementary Schools.*** Lincoln: the Department, 1955, 90 p.

This booklet provides an experimental approach to the evaluation of the elementary school. Evaluative scales for seven major aspects of elementary education are included in the guide. For each of these areas, descriptions of five levels of performance are listed in columnar form. It is recommended that staff members of the school should carefully study their program and determine which level of performance best describes their school. Suggestions for improvement are obvious, since evaluation is by comparison to the other levels of performance described. It is quite apparent that the workshop group which prepared the guide had a forward looking and fundamentally sound point of view in defining levels of performance.

• Glencoe Public Schools, ***A Curriculum Design for Elementary School Education.*** Glencoe, Illinois: the Schools, 1955, 73 p.

Preparation of this bulletin on design involved teachers, administrators, parents, children and specialists in a cooperative enterprise extending over a

period of some five years. It is indeed carefully and comprehensively planned, and provides excellent material for workers in the elementary schools. A statement of guiding principles constitutes a sound basis for designing the curriculum. Most of the booklet is devoted to suggestions for planning instruction in the areas of the curriculum.

• Chrysler Corporation, ***Math Problems from Industry.*** Detroit 31, Michigan: Educational Services, Department of Public Relations, the Chrysler Corporation. Free.

This booklet presents fifty-one typical problems solved by apprentices in the classrooms of the technical training program of the Chrysler Corporation. The company has made this material available to mathematics teachers for use as supplementary material and to illustrate how students might use their mathematics in shops and drafting rooms after they leave school. Teachers will find the material valuable for use in mathematics clubs or special projects for gifted students.

• Shoreline School District, ***Social Studies: Teaching Aids for Grade Three; Social Studies: Teaching Aids for Grade Four; Phonics: A Resource Bulletin for the Elementary Grades.*** Seattle 55, Washington: the School District, East 158 Street and 20 Avenue, N. E., 1955, 105 p., 77 p., and 86 p. (mimeographed)

The third grade guide, which is entitled, "Learning about People Long Ago and Far Away," contains a resources unit on Seattle and units on China, Japan, the Hawaiian Islands, the Philippine Islands, Scandinavia, and Mexico. Numerous learning activities are suggested, and an extensive list of teaching resources is included. The fourth grade guide is entitled, "Learning How Geographical Influences Have Affected Living." One of the units is on the United States, one is a science unit on our universe, and the remaining four units deal with life in the hot moist lands, in the hot dry lands, in the temperate lands, and in cold lands. This guide also contains a comprehensive list of teaching resources. The booklet on phonics describes many activities that may be used in teaching this phase of reading, and, believe me, they are much better than Flesch's horse-and-buggy style drill book!

• Connecticut State Department of Education, ***How to Recognize a Good Elementary School.*** A Guide for Evaluation of Connecticut Elementary Schools. Hartford: the Department, 1955, 28 p.

This guide for evaluating elementary schools is the product of three years of study and experimentation on the part of the Connecticut Elementary Education Council. It is primarily a guide to self-evaluation, and users are directed to look for evidences of how well each job is being done rather than counting people, objects or practices. Evaluation is divided into five areas: climate, curriculum, physical facilities, personnel, and community relations. Characteristics of good school practices are listed for each area.

• Baltimore Public Schools, ***Baltimore, City of Promise,*** 1953, 375 p.; ***The Program of Guidance and Placement,*** 1953, 98 p.; ***Counselor's Manual,*** (revised), 1955, 132 p. (mimeo-

graphed); ***United States Foreign Affairs and United States History, Resource Unit for Grade 12-A,*** 1955, 103 p. (mimeographed); ***Art, Resource Materials for Secondary Schools,*** 1953, 178 p.; ***Biology,*** no date. (mimeographed)

The publication listed first is an attractive, well-printed, and profusely illustrated textbook on the city of Baltimore itself. It was produced by high school students for high school students as resource material to be used in social studies classes. The first of the two guidance publications describes the administration, organization, supervision, and activities of the department of guidance. It is a rather complete description of the program as it is carried out in Baltimore. The manual is written to assist the counselor in performing his functions. The resource unit on foreign affairs is quite extensive with considerable details being given on the subject matter of the unit. A number of pupil activities are suggested and the pamphlet closes with excerpts from pertinent documents.

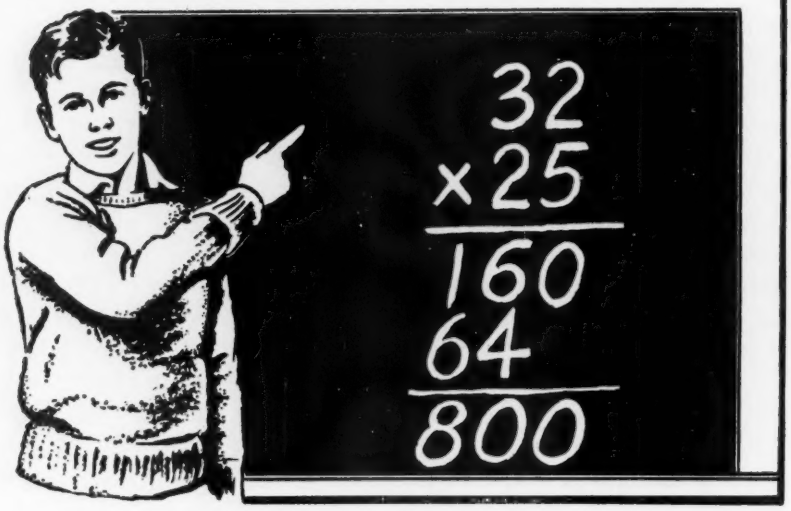
The art guide contains various units recommended for grades 7-12. Considerable text material is given in each unit and suggestions for various types of art activities are contained in the guide. Fourteen units are outlined in detail in the biology guide.

• Grand Rapids Public Schools, ***Suggested Study Guide for Home Management,*** a semester course for the eleventh and twelth grades, 1955, 83 p., $1.00 (mimeographed); ***Suggested Study Guide for Personal Regimen,*** a semester course for eleventh and twelth grade girls, 1955, 48 p., $1.00 (mimeographed); ***Suggested Study Guide for Biology,*** 1955, 98 p., $1.25 (mimeographed); ***Course of Study in English,*** 1955, 56 p., $1.25 (mimeographed); ***Your Junior High School Boy and Girl,*** 1955, 30 p., $.50. Grand Rapids, Michigan: the Schools.

The two home economics guides follow a common style of presentation, using four columns, titled "Needs," "Learnings Involved," "Suggested Learning Experiences," and "Resources." The guides are very complete and should indeed be helpful to teachers in the field of home economics and home relations. The material is organized on a unit basis. The biology guide is comprehensive and very well developed for teacher use. Each unit contains suggestions for motivation, an outline of the subject matter of the unit, a vocabulary list, study questions, suggested experiments and projects, a statement of biological principles involved, and source material useful in developing the unit. The English guide is for grades ten and eleven and treats each of the four phases of a comprehensive English program. The material is organized in columnar presentation under the headings, "Content," "Specific Objectives," "Suggested Activities," and "Suggested Resources." The booklet on the junior high school child is the fifth of a series of booklets which explains the program of the Grand Rapids Schools. Each phase of the junior high school program is discussed briefly. Excellent photographs help to interpret the program to parents, for whom the publication is primarily intended.

• Duval County Public Schools, ***A Program of Education in Duval County Negro Schools; Negro Schools***

# "I know an easier way....

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***of Duval County,*** 1956. Jacksonville, Florida: the Schools, 1955. (mimeo.)

The first bulletin, prepared by the Negro principals, teachers and supervisors of Duval County, describes the program of education in the schools. Some information is given about the community, an extensive age-grade study is included, and information is given about various aspects of the school program. The second publication is a directory of the Negro Schools.

• American Social Hygiene Association, ***Strengthening Family Life Education in Our Schools; Education for Personal and Family Living: A Working Guide for Colleges.*** New York: the Association, 1790 Broadway, 1955. 185 p. and 145 p. $1.00 each. (offset)

The first publication listed is a report of the Midwest Project of the Association for the in-service preparation of elementary and secondary school teachers. The second publication was prepared primarily for educators who work with college students planning to become teachers.

• North Central Association of Colleges and Secondary Schools, Defense Committee, ***Your Life Plans and the Armed Forces.*** Washington, D. C.: the American Council on Education, 1955. 149 p. $2.00.

This handbook is primarily a description of the educational opportunities available in the armed forces of the United States. A chapter is devoted to each of the armed forces and to the Armed Forces Institute.

• Board of Education of the City of New York, ***Curriculum Developments in the Elementary Schools,*** 1955, 158 p.; ***Course of Study, Language Arts,*** Grades 1-6, 1955, 74 p.; ***Record Keeping 1 and 2 for High Schools,*** 1955, 86 p. New York: the Board.

The first bulletin outlines in considerable detail the general design of the elementary school curriculum in New York City and describes techniques for teaching the content area included in this broad plan of design. The chapter on "Planning and Unit Development," is especially good. The chapter on evaluation of growth and progress also is very valuable, and the same thing may be said for the entire booklet. The language arts guide is intended to give teachers and supervisors a framework for planning a program of instruction on a continuous and consistent basis. Suggestions are given for the development of language arts skills at each grade level. In New York City, record keeping is taught as an alternative course to bookeeping. It is designed primarily for the students who will take a general diploma program, and who are not likely to be interested in the more rigid bookkeeping courses. The guide suggests content for the course as well as activities for developing skills in this area. The course of study in nursing and child care outlines the content for three courses now taught in the New York City Schools: Home Nursing and Infant Care; Study of the Pre-School Child; and Practical Nursing. These courses are designed to help all pupils gain skills in the areas of home nursing and the care of the sick in the home as well as an understanding of child development, but two of the courses are also planned as prevocational or exploratory courses.

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# Significant Books in Review

Column Editor: Paul M. Halverson
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**Studying Your Community.** ***By Ronald L. Warren. New York: Russell Sage Foundation, 1955.***

Since public schools have become increasingly aware of their role as social institutions, studying the community—which is the immediate social construct to which the school responds as a social agent—has come into major focus in American education. The "community school" concept, use of community resources, the community as a laboratory for learning, and the social diagnosis of community forces have all been added to the framework of our educational philosophy. Perhaps the least amount of attention has been given, however, to community social diagnosis as a research tool in educational planning. Ronald L. Warren's book, *Studying Your Community*, is, therefore, a welcome addition to this neglected area of professional investigation.

Probably its greatest values will be found in two fields of educational research: (a) in the area of school planing for total community needs, usually undertaken by school boards or administrative groups seeking to establish a frame of reference in which to organize a school system that responds to local social and ecological conditions of the school district; and (b) in teacher education for those who believe that a study of the community at firsthand is a vital part of the learning process in training teachers. Warren apparently has compiled his book with an eye to its use by lay citizens and by professionals from various fields, rather than restricting his study to a scholarly matrix understood only by sociologists or community planners. His volume, therefore, can be easily understood and assimilated by those carrying on action research at the local level. Educators will welcome this book, therefore, as a handbook that is written in simple language and which sets up guidelines for specific studies in such fields as health, recreation, religious activities, and communication, as well as education itself.

Warren cautions his readers who are specialists in any of these fields that each may find shortcomings in the outline of factors to be considered within his own area. He states, quite frankly, that the book is an attempt to explore the socio-economic dimensions of the total community, and each specialist using this handbook on his own must pursue those interests that are beyond the research framework of any particular chapter. In this respect, educators might quarrel on several specific scores with the author's treatment of education in the community. His list of educational references are imbalanced, for example containing nothing specifically in elementary education, and ignoring such definitive statements of policy in

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secondary education as *Education For All American Youth*. Educationists may also wish to qualify such statements as the generalization the author makes about reasons for the teacher shortage, basing his conclusions on the salary differential rather than upon the total conditions of teaching which are equally important in driving teachers into other lines of work. (p. 99.) In defense of the author, who is a sociologist by profession, his chapter on education, however, is objective and quite comprehensive within the purposes for which it was written. In tracing changes of American education, for example, he does not allow himself to be trapped by faddists or emotional attacks on the public schools. His generalizations about public education in this country are, on the whole, sound and logically developed.

Perhaps the most useful part of this book is to be found in the questions that Warren has developed as guides to community research for the various areas he covers. These questions can be adapted to local surveys and will help survey teams to get an overview that they might otherwise miss. Some chapters, such as the one on health, contain over 250 questions on the subject; the chapter on education contains nearly 200. Added together, the questions in each section come to well over 1000 items which those interested in community surveys can use as guides to research.

Finally, this book has been written for the kind of "action research" which educators so often find applicable to educational planning. The author states this purpose throughout the entire volume, but perhaps he best sum-

marizes the research objectives of community surveys at the end:

> Knowledge about the community has value if it is used only as an aid in the normal discharge of the duties of citizenship; or it may lead to more definite, enterprising action toward community betterment. In any case, the survey is not an end product; it is a tool to work with. The end product is a healthy, vital, growing community whose citizens are alert to its needs and possibilities and active in building the type of community they want. (p. 307.)

Since educators are firmly committed to social change in exactly as positive a sense as this, *Studying Your Community* provides them with a thoughtful and well organized research guide by which such an objective can be more fully realized. It is a goal that can be hoped for, especially by educators who believe in community diagnosis as a means of improving public education for its children and the citizens of the community who are served by the schools.

—*Reviewed by* JEROME G. DISQUE, *professor of education, San Francisco State College, San Francisco, California.*

**Values of Future Teachers.** *By Fay L. Corey. New York: Bureau of Publications, Teachers College, Columbia University, 1955. 139 p.*

This book contains material which is both comforting and disconcerting to the interested reader. Packed into the 139 pages are a great many provocative findings concerning the responses of a large number of preservice teachers attending nine state schools of education.

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teachers . . . actually are and how they relate to accepted values which noted educators consider imperative to foster. . . ."

To obtain evidence, a 112-item questionnaire was administered to students. This instrument was designed to elicit responses in ten value areas considered essential to the democratic way of life. In addition, twenty students attending Cortland State Teachers College were selected to participate in a series of tape-recorded discussions.

The major finding, reported in percentages, is that the majority disagree with items which are essentially "socialistic" and "Godless." Evidence is presented to indicate that many of the students appear to be struggling with fears which tend to inhibit the desire to examine controversial issues critically. There is also evidence suggesting that some of the teacher trainees support views which are basically authoritarian and undemocratic. Data are also presented which indicate that there is considerable variation between what students say and what they do.

On the negative side, one may raise many questions about the techniques of the study and the analysis of results. The items on the questionnaire do not appear to be characteristic of attitude items, but rather seem to be similar to those on opinionnaires. Another factor of concern to this reader is the feeling that many of the items appear to be acceptable to the majority largely because they are verbalisms.

In the report of the findings there are several puzzling items related to procedure. In some instances the author

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indicates that a "slight" majority agreed on an item. In one case the "slight" majority turned out to be 70% of the sample. In the same case the "undecided" and the "disagree" responses were combined and called the minority opinion. Are we to assume that those who took a definite stand and those who were undecided are really "birds of a feather"?

In the conclusion it is pointed out that for every statement there is a minority opinion. This seems to cause some concern for the author. Are we to suppose that Dr. Corey would have desired 100% uniformity of opinion for each statement? Is this consistent with the value, "Intelligence and Freedom to Think"? It seems that in her earnest desire to have all students accept the democratic values the author may have neglected the worth of the nonconformist and status-quo-oriented individuals.

It seems possible that much of the variability in response might be explained in terms of item construction and the limitations of paper and pencil tests of this nature.

It should be pointed out that this book is well worth reading. For teachers, administrators and lay people concerned with any aspect of education there are the challenges, "Are we doing a good enough job? What more can we do?"

—*Reviewed by* MARVIN TAYLOR, *professor of education, Queens College, New York, New York.*

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